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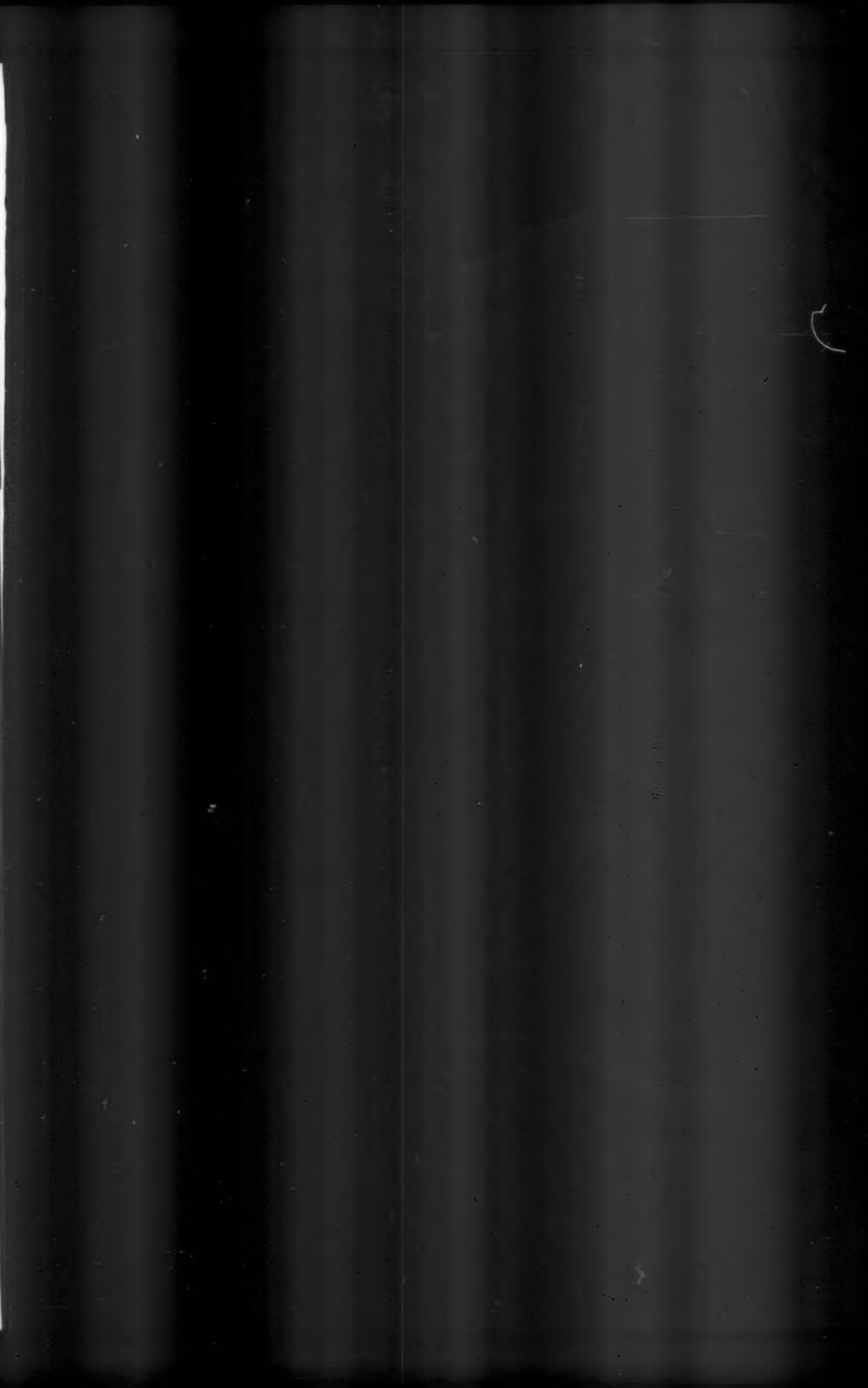
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CORRECTION

Owing to delay in the receipt of the corrected proof, there is an error in Professor Pigou's article in the last issue of the Journal. In the formula on page 42, M should stand for the number of titles to units of legal tender, not the number of actual units of legal tender. In the formula on page 43 and subsequently it stands for the number of actual units of legal tender.



THE
QUARTERLY JOURNAL
OF
ECONOMICS

NOVEMBER, 1917

THE WAR TAX ACT OF 1917

SUMMARY

I. History of the act in Congress, 1. — II. Taxes proposed but discarded: supplement to income tax of 1916, 5; customs duties and consumption taxes, 6. — III. New Taxes: on transportation and communication, 6; new excises, 7. — Probable incidence of these excises, 9. — IV. Increased rates on liquors and tobacco, 10. — V. Increase of postal rates, 14; of inheritance tax rates, 15. — VI. Income tax rates, 16. — Exemption limit lowered, 19. — Special tax on corporations, 19. — Corporate surpluses, 23. — Stoppage at the source and information at the source, 25. — VII. Excess Profits Tax, 27. — House bill followed previous legislation, of March, 1917, 27. — Plan based on pre-war profits in the Senate, 29. — Compromise emerges from Conference Committee, 32. — Definition of "Capital," 33. — Application to "excess" incomes of individuals, 34.

I

HISTORY OF THE ACT

THE tax act of 1917, unexampled tho it is as regards the amount of revenue designed to be secured, is based in some important respects on earlier measures. The preceding Congress, both in its session of 1915-16 and in its second session in 1916-17, had passed two important acts which prepared the way for the war taxes and much affected their scope and shape. The first of these was the act of September 8, 1916; the second the

act of March 3, 1917. The first started the lines of action which proved most important in 1917. The income tax was increased, the normal tax being made 2 per cent and the surtaxes correspondingly higher; the federal inheritance tax was established; and a special tax was imposed upon munition manufacturers, constituting the initial stage of the excess-profits levies which bulked so large in 1917;¹ and finally, some increase was made in the beer and wine taxes, and some special license taxes were levied. In the next act, that of March 3, 1917, passed in the second session of 1916-17, the most important further step was the general excess-profits tax. Some increase also was made in the inheritance tax. The two measures were on the statute book when consideration of the new war taxes began in the extra session of 1917. Some of their provisions are left unrepealed, the new enactment taking the shape of amendments or additional provisions; others are completely superseded. Some details of the relations between the three measures will be noted in the following pages; all need to be consulted for an understanding of the final outcome of the series of enactments.²

Action in the House of Representatives was prompt, and perhaps somewhat hurried. The House bill was reported by the Committee on May 9 and was passed on May 23. In the Senate discussion and deliberation were prolonged. The Senate Committee on Finance undertook a careful and conscientious revision of every

¹ A remnant of this first stage in the excess profits legislation appears in a provision in the war tax act by which a tax at the rate of 10 per cent is imposed upon the entire net profits of manufacturers of munitions. The act of September, 1916, had imposed this tax at the rate of 12½ per cent. It might have been expected that the general excess profits tax would replace it. Nevertheless, it is retained, for the single year 1917, at the slightly reduced rate of 10 per cent.

² Below, on pages 16 and 18 will be found tabular statements showing how the income tax rates and estate tax rates were modified in the several measures.

section of the voluminous measure. In the early part of August the Committee's consideration of the bill was thought to be concluded, when an unexpected revision of the Treasury estimate of revenue needs, and a complication due to the prohibition of the use of grain for distilling and brewing, caused the measure to be withdrawn by the Committee immediately after it was reported. In revised and more or less definitive form, it was not again submitted to the Senate until August 15. Finally passed by the Senate, September 10, it went to the Conference Committee, emerged thence on September 29, and became law on October 3.

The action of the Conference Committee was important on almost every item, and on many was almost radical. The differences between the two houses of Congress were great, and were concerned not only with matters of detail but with some fundamental questions of principle. Hardly a paragraph in the entire measure failed to carry its amendment as the bill passed the Senate. Every amendment, whether petty or of far-reaching consequence, had to be gone over in the Conference Committee. Virtually the entire measure was thus reconsidered and revised in a scant fortnight, by a group of eight men already wearied by the exigencies of a trying session, and now compelled to work under high pressure. It was inevitable that under such circumstances provisions should slip in, or should fail to be eliminated, which would have received different treatment under conditions less unfavorable. The situation is familiar, and indeed is inevitable under our constitutional system and our methods of legislative procedure. Conference committees, differently constituted for different measures, have come to be more and more the effective agents for settling the details of legislation. The practice is admitted to be far from ideal. Some of

the consequences in the measure here under consideration will be noted in the following pages.

In the earlier stages of the bill resort to a very wide range of levies was contemplated. True, there was reliance from the outset upon the income tax and the war-profits tax as the chief sources of revenue. In addition, however, much was expected from various other sources — additional import duties, taxes on communication and the like, taxes on amusements, certain additional excises, stamp taxes. Some of these additional levies were discarded at one stage or another; others, while retained, were imposed at lower rates than had been originally put down. The outcome in the measure as finally passed was that the income tax, the war-profits tax, and the higher rates of the well-established internal taxes on alcoholic liquors and on tobacco, became more pronouncedly the main revenue producers.¹

¹ In this discussion I have not followed the order in which the several taxes are arranged in the text of the act. Following the precedent established in 1916, the present act is arranged under titles, each title having a series of sections, numbered in successive hundreds. The headings of the several titles and the numbers of the sections under them are as follows:

Title I. — War Income Tax, Section 1, seq.

Title II. — War excess profits Tax, Section 200, seq.

Title III. — War Tax on Beverages, Section 300, seq.

Title IV. — War Tax on Cigars, Tobacco, and Manufactures thereof, Section 400, seq.

Title V. — War Tax on Facilities Furnished by Public Utilities, and Insurance, Section 500, seq.

Title VI. — War Excise Taxes, Section 600, seq.

Title VII. — War Tax on Admissions and Dues, Section 700, seq.

Title VIII. — War Stamp Taxes, Section 800, seq.

Title IX. — War Estate Tax, Section 900, seq.

Title X. — Administrative Provisions, Section 1000, seq.

Title XI. — Postal Rates, Section 1100, seq.

Title XII. — Income Tax Amendments, Section 1200, seq.

Title XIII. — General Provisions, Section 1300, seq.

II

TAXES PROPOSED BUT DISCARDED

Among the taxes which were considered but finally discarded, may be mentioned the supplement to the income tax of 1916, increased import duties, and the so-called "consumption taxes." The supplement which the House proposed to add to the income tax of the current year was to have been one-third of the tax on the incomes of 1916 as levied under previous enactment, and was to have been collected toward the close of 1917. It was vehemently opposed as retroactive, was summarily rejected by the Senate, and not restored in Conference. To the present writer it seems by no means so indefensible as it was in many quarters thought to be. Indeed, as a war emergency tax, and moreover one which would have yielded immediate and certain revenue, it was justifiable on solid grounds. But the feeling against it was strong, and it was lost from sight in the eager discussion of the new income tax rates on the incomes of 1917 and of the excess-profits tax.

The additional import duties proposed by the House also met with little favor in the course of debate, and soon were dropped from serious consideration. The change proposed by the House Committee, and embodied in the House bill, provided for an additional duty of 10 per cent ad valorem on each and every article imported (some insignificant exceptions were made) — not a 10 per cent addition to the existing duties, but an additional duty of 10 per cent ad valorem on every commodity. All articles previously free would have been subjected to a duty of 10 per cent; articles previously subjected to a duty of 20 per cent would have become dutiable at 30 per cent; and articles previously sub-

jected to a specific duty would have become subject to compound duties, *i. e.*, the previous specific duty plus 10 per cent *ad valorem*. This blanket proposal was admitted by the House leaders to be open to serious objection, and its abandonment in the Senate met with general approval.

In its place the Senate Committee proposed what were entitled in the bill "excise taxes," and were popularly dubbed "consumption taxes," upon a selected list of commodities — namely, tea, coffee, cocoa and sugar. Tho called excises, they were in reality import duties in so far as they affected coffee, tea and cocoa; it was only with regard to sugar that the term excise was accurate. There seems to have been a curious unwillingness to speak of import duties by name, perhaps for fear that in some unexpected way the burning question of protection and free trade might be revived. The sugar excise was notable, in that a tax (at the rate of one-half cent a pound) was proposed on all refined sugar and other sugars suitable for consumption. The proposal was a tacit recognition of the unsatisfactory operation of the existing import duty as a revenue measure. Nevertheless, all of these "consumption taxes" disappeared in the final adjustment. Even the remnant of import duties proposed by the Senate Committee was rejected by the Senate itself and did not reëmerge in the Conference Committee.

III

NEW INTERNAL TAXES

Certain other taxes finally retained are comparative novelties in the Federal finances. Some are entitled taxes "on facilities furnished by public utilities, and insurance," others are entitled "excise taxes." The simplest are the taxes on transportation and communi-

cation, clearly designed to be borne by the user or consumer. On all charges for freight transportation a tax of 3 per cent is levied; on passenger transportation one of 8 per cent; on seats and berths in parlor and sleeping cars and on vessels, 10 per cent; on express matter, roughly 5 per cent (one cent for each twenty cents or fraction); on telephone and telegraph messages other than ordinary local calls (that is, where the charge is fifteen cents or over) a tax of five cents for each message. In the bill as passed by the House there were similar taxes upon the use of gas and electric light and power, but they disappeared. All, it is expressly provided, shall be collected by the several concerns conducting the industries, which are to add them to their usual rates, and so shift them once and for all to the consumers. A somewhat different result is apparently contemplated, or at least a different possibility is foreseen, as regards the taxes imposed on the issuance of insurance policies — life insurance, marine and fire insurance, and casualty insurance. Nothing is here said of collection of the tax by the insurance companies from the persons insured. The matter of shifting is left to settle itself.

The "war excise taxes" provided for in the next succeeding title include a considerable array, as is indicated below.¹ In all cases the levy is upon "the manufacturer, producer, or importer." But there

¹ The main taxes are:

	Per cent of the prices for which sold
On automobiles.....	3
piano players, phonographs and records.....	3
jewelry, real or imitation.....	3
sporting goods (tennis, golf, and the like).....	3
cameras.....	3
perfumes, essences, toilet preparations.....	2
patent medicines.....	2
chewing gum.....	2
moving picture films $\frac{1}{2}$ to $\frac{3}{4}$ cent per foot.	

There are also annual license taxes on pleasure boats.

seems to have been some uncertainty of intention and of expectation as regards the ultimate bearers of the burden, and for this reason some hesitation with regard to the rates. Ordinarily, such taxes are "indirect," in the sense in which import duties and taxes upon tobacco and spirits are indirect: they are expected to reach the consumer, not to rest upon the producer or dealer who makes the immediate payment to the Treasury. As has just been noted, shifting to the user or consumer is expressly authorized and indeed required for the taxes upon transportation. But much was said in the debates to indicate an intention that these "excise taxes" should reach the producer, not the consumer. The industries selected are largely of the sort having some kind of monopoly, or some prospect of unusual profits for the time being such as might cause the taxes to rest on the producers. The House bill, for example, had provided for a tax of 5 per cent on motor vehicles; which was in some quarters opposed on the ground that a tax upon the manufacturers should be levied not according to gross output, but according to net earnings. The objection obviously rested on the expectation that the tax was to be paid once for all by the manufacturers, not shifted to consumers. The taxes upon cameras, moving pictures, patent medicines, and the like, suggested the same question. The sound policy would seem to be to levy taxes upon gross output strictly as excises and in such manner as to lead ordinarily to their being shifted to consumers. If designed to reach monopolistic or exceptional profits of producers — and something of the sort was doubtless held in mind for many of these excises — they should be levied with reference to net profits, not on the basis of gross output. In other words, the principle of the excess-profits tax should be applied, not that of excise taxation. As a

matter of fact, it is more than probable that in actual operation many of the new excises will bear upon the producers rather than upon the consumers. Taxes of this kind, at rates as moderate as here imposed, are likely to be absorbed in the chain of producers and middlemen even if the commodities are produced under conditions of the freest competition and under normal conditions of demand and supply. If the commodities are produced under conditions akin to monopoly, or in a period of exceptional demand and exceptional profit, such taxes are more than likely to be absorbed before reaching the final purchasers. But in so far as they so operate, they will necessarily be unequal in their incidence on the several producers or sets of producers. On this ground, they will be effectively attacked and doubtless prove temporary; they are unlikely to find a permanent place in the new system of Federal finance which must eventually develop from the war's experiences.

And yet, curiously enough, there is one important provision which seems to give clear indication that all these taxes are expected to reach the consumer. Among the administrative provisions of the act one is almost a novelty in Federal finance.¹ It provides that when contracts have been made before May 9, 1917 (the date when the bill was reported by the Ways and Means Committee to the House) the vendor under the previous contract shall be entitled to add to the stipulated price an amount equal to the newly imposed tax. This important privilege is extended not only to contracts for the sale of tobacco and spirits, where the newly imposed taxes are heavy, but also to the various excises just described. It is applicable also to the increased stamp tax upon playing-cards. In other words, as

¹ I say, almost; a similar provision is to be found in the civil war revenue act of June 30, 1864. Attention was called to this in the Tariff Commission's Interim Report, referred to below, p. 13.

regards pending contracts, these taxes are treated unmistakably as if designed to be borne, not by the manufacturer or original payer, but by the person to whom the sale is made.

Brief mention will suffice for the newly imposed taxes upon "admissions and dues." One cent is levied for each ten cents of charge or fraction thereof on admission charges for all places of entertainment. It is expressly provided that the tax on admissions shall be paid "by the person paying for such admission." There is also a tax of 10 per cent upon the dues and fees of clubs, where the dues exceed \$12 per year. The only phase of the taxes in this group which aroused much discussion was the extent to which they should be imposed upon motion picture shows. In the Senate, the levy was tempered by remitting the tax where the maximum charge for admission, either for motion picture shows or for outdoor amusements, was twenty-five cents. The less liberal House provision, however, was finally retained: the tax is remitted only where the maximum charge for admission is five cents, or in the case of outdoor amusements, ten cents. As regards these taxes, and also those upon tobacco and fermented liquors, there seems to have been no hesitation, such as appeared with regard to the so-called consumption taxes, from levies that would reach the great mass of the community.

IV

LIQUORS AND TOBACCO

It was a foregone conclusion from the beginning that an increase would be made in the taxes upon alcoholic liquors and upon tobacco. On tobacco, no other than questions of detail arose in the course of the session. The rates were nearly doubled, as they could be with-

out danger of appreciable diminution of consumption; and a large increase of revenue was certain to be secured with ease.

As regards the taxes upon liquors, the course of events in the session was peculiar. A doubling of the rates both on distilled spirits and malt liquors was proposed at the very first stage, in the bill as reported to the House by the Ways and Means Committee, and a sharp increase was finally retained in the act as passed. In the Senate, however, an episode occurred which caused much delay, threatened at one time to dislocate all calculations of revenue, but finally was without consequences for the tax act itself. An amendment first adopted by the Senate provided for a tax at a prohibitory rate (\$60 per hundred pounds) on all grain used in the production of spirits. This was equivalent to complete prohibition of the manufacture of liquor. It left in the air, however, the question of the disposition of the large stocks on hand. A proposal was also made for purchase by the government of these stocks, tho without specific provision as to the final disposition of these stocks by the government itself. The prohibitive tax was finally eliminated from the act, because meanwhile the food administration act had been passed (August 10), entirely prohibiting during the war the use of grain for distillation. The other proposal, for purchase by the government of existing stocks, virtually disappeared entirely. The outcome, so far as concerns the war tax act, thus was that it provided simply for the increase of the taxes on distilled and fermented liquors. The increase on distilled liquors was even greater than had been contemplated at the start. The first proposal had been to double the tax (from \$1.10 to \$2.20 per gallon); as finally settled, it was made \$3.20 per gallon on distilled spirits to be used as beverages. A rate so ex-

tremely high might not have been fixed had it not been for the virtual prohibition of future production and the consequent limitation of the tax to stocks already on hand.¹

Still another question, of quite a different sort, was raised in connection not only with the internal revenue taxes, but also with the increased tariff duties which, tho not finally imposed, were for sometime under consideration. It related to the mode in which interim conditions should be dealt with; that is, the conditions which repeatedly occur in the interim between the first proposal of increased taxes of this type and their final enactment. The temptation obviously is for importers and other dealers to withdraw commodities from bonded

¹ In detail, the changes on tobacco and liquors are as follows:

	Old Rate	Total under War Tax Act
Tobacco, snuff, chewing and smoking.	\$0.08 lb.	\$0.13 lb.
Cigars:		
Weighing more than 3 lbs. per M if made or imported to retail at less than 4c each	3.00 per M	3.00 per M
To retail at 4c or more each and not more than 7c each.	3.00 "	4.00 "
To retail at more than 7c each and not more than 15c each.	3.00 "	6.00 "
To retail at more than 15c each and not more than 20c each.	3.00 "	8.00 "
To retail for more than 20c.	3.00 "	10.00 "
Weighing not more than 3 lbs. per M. ....	.75 "	1.00 "
Cigarettes:		
Weighing not more than 3 lbs. per M.	1.25 "	2.05 "
Weighing more than 3 lbs. per M.	3.60 "	4.80 "
Distilled Spirits:		
For beverage purposes.	1.10 proof gal.	3.20 proof gal.
For non-beverage purposes.	1.10 " "	2.20 " "
Spirits Rectified (supplementary tax)....		.15 " "
Grape brandy used in fortifying wines. ....	.10 " "	.30 " "
Wines:		
Still wines 14% or less alcohol. ....	.04 wine gal.	.08 wine gal.
over 14% and not over 21%. ....	.10 " "	.30 " "
over 21% and not over 24%. ....	.25 " "	.50 " "
over 24% alcohol.	1.10 " "	2.20 " "
Cordials, Liqueurs:		
Containing wine fortified.	1½c. per ½ pt. or frac.	3c. per ½ pt. or frac.
Sparkling Wines.	3c. " "	6c. " "
Artificially carbonated wine.	1½c. " "	3c. " "
Fermented Liquors.	\$1.50 bbl.	\$3.00 bbl.

warehouses, or to increase their importation or production, in order to get them safely into the channels of trade before the higher rates go into effect. A step toward meeting this situation had been taken in the Spanish war revenue act of 1898, when the so-called "floor tax," or, as it is sometimes called, the process of "following the goods into the channels of trade was first introduced." A more consistent and wide-reaching effort of the same sort is made in the present act. It is provided that all distilled spirits, for example, held by a retailer in excess of fifty gallons, and by any other person, in any quantity whatever, shall be subject to the additional tax of \$2.10. In other words, they shall be subject to the same total tax as the spirits not yet withdrawn from bonded warehouse. On tobacco, something in the nature of a compromise is adopted, similar to that of the Spanish war revenue act of 1898: tobacco and the like, upon which a tax at the previous rate has already been paid, are subjected to a tax of one-half the increase of tax provided for future products.

For all cases of this sort a different procedure had been recommended by the newly established Tariff Commission, in the first report submitted by that body to Congress. The recommendation was for the adoption of something analogous to what are called "padlock laws" in continental Europe. These provide that new taxes, when formally proposed by the executive to the legislature, shall go into effect at once, subject to refund in whole or in part if the proposed changes should not be finally enacted. The same procedure has long been systematically followed in Great Britain. Some modification of procedure would be necessary in this country, in view of the great differences of constitutional arrangement and legislative procedure; and suggestions for possible methods of dealing with the

situation, on the general "padlock" principle, were made by the Tariff Commission.¹ It is certain that the so-called "floor tax" is far from effective. It calls for an enormous volume of petty returns from dealers and retailers, almost impossible to supervise with effect. It imposes a burdensome and expensive task upon the Internal Revenue Department. Some better mode of dealing with the problem, such as was suggested by the Tariff Commission, would seem feasible and highly desirable.

V

POSTAL RATES; INHERITANCE TAX

A bitterly contested part of the measure was that concerned with the changes in rates upon second-class matter, that is, periodicals sent by publishers through the mails. The increase in the letter rate from two to three cents, and in the postcard rate from one to two cents aroused debate, but no animated controversy. An enormous amount of time, however, was given to the second-class rate, on periodicals mailed by their publishers. All the world knows that this part of the postal business is conducted at a loss to the government. It is a moot question whether educational and social gains are secured such as to make this loss unobjectionable; and there is in addition the further complication that many publications and great businesses have adjusted themselves to the existing system, and therefore in some sort have vested interests. The outcome is not only a compromise, but one which may be disturbed before it is completely carried through. A division is made in the charges according to the space occupied in periodicals by reading matter and by advertising.

¹ See the report on Interim Legislation submitted by the Tariff Commission to the Ways and Means Committee in April, 1917.

On the space occupied by reading matter, the rate is advanced from the existing figure of one cent a pound to one and one-fourth cents for the fiscal year 1918-19, and to one and one-half cents per pound after July 1, 1919. For the space occupied by advertisements a zone system is adopted — progressive rates as distance increases. These rates are to be gradually advanced during the period 1918-20, a definitive rate finally going into effect for the fiscal year 1922. The whole topic was discussed, and rightly so, as one in which the fiscal element was comparatively subordinate. The need of securing at once a vast increase of revenue for the government naturally caused attention to be given to a part of its operation which involves financial loss; but the details of the changes as made rest upon other than financial reasons. It remains to be seen whether the modifications of general policy which the financial exigencies thus served to bring about will be retained when another occasion presents itself, as it will not fail to do, for further consideration of the postal rates on printed matter.

The inheritance tax, or "war estate tax," provides for an increase of rates over those established by the acts of September, 1916 and March, 1917. The caption "war estate tax," and the circumstance that the form of enactment is that of imposing additions to the previous taxes of the same sort, would seem to indicate that a temporary levy is contemplated, to be maintained only so long as the war lasts. Yet, there is no specific limitation of the estate tax to the duration of the present war. Regarded as a temporary tax, it is obviously objectionable. It reaches the estates of those only who happen to die during the emergency period, and hence inevitably is unequal in its operation. A tax of the same sort, it will be recalled, was imposed during the Spanish War;

after having been in operation for a few years on the estates of those then decedent, it was repealed. Whether there will be a similar outcome from the present measure remains to be seen. Not improbably the accumulated rates — the inheritance tax is fixed by the previous acts, plus the additions now made — will be maintained through a long period, and eventually become a permanent part of the Federal tax system. So maintained, they will raise the whole question of the relation between state and federal taxes of this sort, and may become the initial phase of a movement by which all levies of the kind are concentrated in federal hands.¹

VI

INCOME TAX

For revenue purposes main reliance is put upon the income tax and the excess profits tax. The course of legislation regarding these deserves detailed consideration.

It was certain from the start that a large increase would be made in the rates of tax on the larger incomes.

¹ The inheritance tax rates under the three acts, and the total levy finally resulting, are indicated in the following tabular statement:

Net estate	Act of Sept. 8, 1916	Act of March 3, 1917	Act of Oct. 3, 1917	
			Additional rates	Total tax
Not exceeding \$50,000.....	% 1	% 1½	% ½ of 1	% 2
Exceeding \$50,000 but not \$150,000.....	2	3	1	4
" 150,000 " 250,000.....	3	4½	1½	6
" 250,000 " 450,000.....	4	6	2	8
" 450,000 " 1,000,000.....	5	7½	2½	10
" 1,000,000 " 2,000,000.....	6	9	3	12
" 2,000,000 " 3,000,000.....	7	10½	3½	14
" 3,000,000 " 4,000,000.....	8	12	4	16
" 4,000,000 " 5,000,000.....	9	13½	4½	18
" 5,000,000 " 	10	15	..	..
" 5,000,000 " 8,000,000.....	..	..	5	20
" 8,000,000 " 10,000,000.....	..	..	7	22
" 10,000,000 " .....	..	..	10	25

All proposals and all tentative drafts suggested income taxes which would reach at least 50 per cent on the largest incomes, or rather 50 per cent on those constituent parts of large incomes in excess of the highest dividing point. The only question in doubt was whether on such constituent parts of the large incomes taxation would proceed to the point of "conscription." Both in the House and in the Senate higher rates were debated and voted on than had been proposed by the two committees — in the House higher rates than had been proposed by the Ways and Means Committee, and in the Senate higher rates than had been proposed by the Finance Committee. Yet the conscription principle, which would look to complete absorption by taxation of all income above a given level, never was soberly entertained. The highest rate proposed by some of the more radical legislators, on the excess of income above some very large sum, say a million dollars, was not considerably above the rate finally adopted. Much as was said in Congress and out of Congress in favor of conscription, nothing quite so radical was put into effect.

Nevertheless, the rates as finally adopted on the very large incomes represent an application of income taxation more drastic than has ever been adopted by any other community at a corresponding stage of exigency. It must be remembered, however, that the highest rates appear only as surtaxes on the excess of income above a given sum. The rate of tax upon an individual's total income obviously depends upon the extent to which his income exceeds the "bracket" within which it falls. The highest surtax, on the excess of income over \$2,000,000, is 63 per cent; on an income of \$2,500,000, this rate is collected only on the last half million; on an income of \$5,000,000 it bears upon three-fifths of the total income.

As it appears from the tabular statement,¹ the significant changes made in the course of the session were the increases in the rates upon the highest incomes. On incomes of \$40,000 and less, the changes were inconsiderable. As regards those of larger amount, the trend was to increase the rates at each successive stage of consideration in the House and Senate, and to increase them more as the incomes became larger. The maximum

¹ The following tabular statement shows the surtax rates from 1913 to 1917, and the changes made in the course of the current session.

Income	Surtax		Additional Surtax, 1917					Total Surtax
	Act of 1913	Act of 1916	House Bill as reported by Ways and Means Committee	House Bill as passed by House	Senate Bill as reported by Finance Committee	Senate Bill as passed by Senate	Act of 1917	
but not								
Exceeding exceeding	%	%	%	%	%	%	%	%
\$5,000 \$7,500	..	..	1	1	1	1	1	1
7,500 10,000	..	..	2	2	2	2	2	2
10,000 12,500	..	..	3	3	3	3	3	3
12,500 15,000	..	..	4	4	4	4	4	4
15,000 20,000	..	..	5	5	6	6	5	5
20,000 50,000	1	..	..	..	..	..	..	..
20,000 40,000	..	1	6	6	8	8	7	8
40,000 60,000	..	2	8	10	10	10	10	12
50,000 75,000	2	..	..	..	..	..	..	..
60,000 80,000	..	3	11	13.75	12	14	14	17
75,000 100,000	3	..	..	..	..	..	..	..
80,000 100,000	..	4	14	17.5	16	18	18	22
100,000 150,000	..	5	17	21.25	20	22	22	27
100,000 250,000	4	..	..	..	..	..	..	..
150,000 200,000	..	6	20	25	23	25	25	31
200,000 250,000	..	7	24	30	26	30	30	37
250,000 300,000	..	8	27	33.75	29	34	34	42
250,000 500,000	5	..	..	..	..	..	..	..
300,000 500,000	..	9	30	37.5	31	37	37	46
500,000 750,000	..	..	..	..	..	40	40	50
500,000 1,000,000	..	10	..	41.25	..	..	..	..
500,000	6	..	33	..	33	..	..	..
750,000 1,000,000	..	..	..	..	..	45	45	55
1,000,000 1,500,000	..	11	..	..	..	..	..	61
1,000,000 .....	..	..	..	45	..	50	50	..
1,500,000 2,000,000	..	12	..	..	..	..	..	62
2,000,000 .....	..	13	..	..	..	..	..	63

additional surtax, on the largest incomes, was proposed to be 33 per cent in the bill as reported by the House. It became 50 per cent in the measure as finally enacted. Increases roughly corresponding were made in the rates upon other large incomes.

The rates of the income tax were by no means the only problems that called for solution. Closely connected was the change in the amount exempt from taxation. Under the acts of 1913 and 1916 this had been \$4000 for married persons, and \$3000 for those not married. The exempt amount was now reduced to \$2000 and \$1000 respectively. A change in this direction had long been advocated by fair minded observers and at no state in the session's discussions was it seriously opposed. As finally enacted, however, it took effect in such fashion as to make quite uncertain what might be the outcome under the definitive rearrangement to which the income tax must ultimately be subjected. The new act simply provides for certain "additional" income taxes. It makes no unified readjustment; it merely adds to or amends certain provisions of preceding statutes. The new provisions by which incomes down to \$2000 and \$1000 are reached apply only to the new or "additional" normal tax. The tax exemption still remains at \$3000 or \$4000 as regards the old "normal" tax. It is quite among the possibilities that later legislation will wipe out the "additional" taxes, leaving the provisions of older date untouched. Should this happen, it is conceivable that, without express statement and by inconspicuous steps, the exempt amount will be restored to its old figures.

A new and additional tax was levied as part of the income tax system, upon corporations only, making the total rate upon corporations 6 per cent. The 2 per cent rate of the act of March, 1916, being doubled by the

war revenue measure, already made the general rate 4 per cent. An additional levy of 2 per cent on corporations brought the tax upon their income to 6 per cent. This sort of differentiation of the corporation tax from the general income tax is open to serious question. There is an inevitable tendency, even when the corporation tax is at the same rate as the general income tax, to regard the former as a special levy upon the corporation, — as something in the nature of an excise, not as a constituent part of the income tax system. The corporation itself in any case is inevitably disposed to treat the tax as it treats ordinary local taxes on its tangible property, *i. e.*, as an item to be reckoned among its expenses. The expectation, or the supposedly reasonable thing, is that after meeting all taxes and expenses of every sort the corporation shall be able to pay its normal and reasonable dividends. A corporation subject to public regulation, in presenting its case for higher charges, will lump all taxes in its expense accounts, and will urge, in perfect good faith, that the shareholders are entitled to their dividends after all taxes have been paid. It will not differentiate the income tax as something designed as a levy upon the shareholders and to be deducted from the source of their incomes. This general tendency, in the direction of shifting the tax on users and consumers, is obviously strengthened when the corporation is subjected to a special rate. The tax comes even more to be regarded not as one that serves to reach the shareholders' income, but one that is to be assimilated to other taxes, to be shifted to the general public, and to leave the shareholder's income undiminished. Regarded as part of a permanent income tax system the differentiation is indefensible as a matter of principle, and inexpedient as regards the probable ultimate outcome.

This episode raises once more the whole question whether it is desirable to maintain the practice of levy at the source as regards the income of corporate shareholders. It is by this method that they are supposed to be taxed now; and the result is that people ordinarily consider dividends as "exempt" from the normal income tax. The alternative, as need hardly be said to the conversant reader, is that of information at the source. If dividends were taxed directly to the shareholder and on the basis of a return by him; and if the corporations themselves were called upon simply to give aid in the assessment of the tax by returns showing who are the shareholders and what are the dividends received by each and every one of them — this part of the income tax would not be open to the sort of misconception which is promoted by the established method and still further promoted by the differential rate now established.

It happens that a long step toward the introduction of information at the source, and the cessation of deduction at source, has been already taken. The war tax act has done away with deduction for the two most important classes of income to which that method had heretofore been applied — namely, salaries and the like payments, and interest upon bonds and mortgages. A new section¹ provides that all persons making payments to others (potential taxpayers) amounting to \$800 or more in any one year, shall render returns to the Commissioner of Internal Revenues, stating the amount of such payments and the names and addresses of the recipients. It is further required that similar returns shall be made, regardless of amount, for *all* payments of interest upon bonds or mortgages. The provisions

¹ § 1211, which adds six new sections; among these, the new section numbered 28 contains the provision here noted.

formerly in force (under the act of September, 1916, which had replaced those of 1913) for deduction at the source, are now amended so as to be applicable only to very limited sets of cases. Payments to non-resident aliens are still left subject to that process. Perhaps more important is a section by which it is left in effect where interest payments are made on bonds containing the so-called "tax free" clause, by which the obligor under the bond undertakes to pay any taxes assessed on the obligee with respect to principle or income.¹ For this important class of cases, left over from older days, it is provided that deduction at the source may continue; that is, the bond holder shall be subjected to tax through deduction by the obligor, *unless* he files with the latter on or before February 1 of the taxable year a notice in writing claiming the benefit of the stipulation. It is not improbable that a considerable number of persons will fail to send in their notices, and consequently will find themselves unexpectedly mulcted for tax; and the clerical labor involved in classifying the coupons will be onerous.

The new requirement for information at the source with reference to salaries, or other "fixed or determinable gains," is likely to be most important as regards the income taxes now imposed upon smaller incomes, due to the lowering of the exemption from \$2000 to \$1000. But for some such provision moderate salaries of this range would largely escape. Needless to say, as regards income accruing in the shape of interest upon bonds, the filing and proper assembling of the enormous number of separate items, in such manner as to bring together the constituents of the income of each taxpayer, constitute a task of stupendous magnitude. It is quite uncertain just how great a clerical force will be

¹ See § 1205 of the war tax act.

needed; even more uncertain whether it can be got together, and can accomplish the task. Nevertheless, the mere fact that the information is potentially available, and the common knowledge that returns of this sort have been sent to the Treasury officials, may suffice to bring about full statements from the individual taxpayers, and so contribute effectively to the collection of all taxes due.

One further item in the income tax system deserves notice. Under previous legislation, dividends paid by one corporation to another had been subject to income tax on the net income of the paying company, and had again been subject to tax as constituting part of the income of the holding company. This double taxation — really double — is not indeed abolished, but is restricted within the previous limits. There is no doubling of the "additional" taxes imposed by the new law.

A troublesome question arose with regard to the taxation of the surplus income of corporations — that is, corporate income not divided among stockholders through dividends, but retained as surplus in the coffers of the corporation. Income of this sort, of course, always had been taxable, and remains taxable, at the stated rates applicable to corporations — the rate of "normal" income tax; and it is subject also to the additional taxes on all corporate net income. So long, however, as it remained in the hands of the corporation, surtax rates were not applicable to it, since these relate to the total income of the individual taxpayer. There was a possibility that a corporation, owned and controlled by a small number of shareholders, might divide moderate sums in dividends, and retain in its treasury a large surplus. Such a surplus might then be distributed among the shareholders at a subsequent date, when the cessation of war emergencies would presum-

ably have led to a reduction in the surtax on large individual incomes. The possibility that such accumulation of surplus might be used for the purpose of intentionally and directly evading the income tax had already been faced in the revenue act of 1916, which contained (in section 3) provisions imposing penalties for fraudulent evasion of this sort. But such criminal provisions could not be applicable where a corporation, in the not unreasonable exercise of its discretion, might accumulate a surplus instead of distributing all its profits in dividends.

This possibility was the more troublesome because of another and apparently quite unrelated matter. The excess profits provisions had originally been made applicable to corporations only. As amended by the Senate, they became applicable to individuals also; a change which led to still further complications, as will presently be explained.¹ Once made, it put an end to a rough sort of equipoise which had previously obtained between the combined income and war profits taxes as applied to corporations, and the same taxes as applied to individuals. Individuals and partnerships, like corporations, had always been subject to income tax on their total net earnings. But an individual whose net earnings were large and who reinvested a considerable part of them in his business — which, of course, is analogous to the accumulation of a surplus by a corporation — was nevertheless subjected to a surtax upon his entire income, whether it inured to him in the form of cash or in the form of a reinvested business surplus. The same was the situation with a partnership. Under previous legislation, accordingly, an individual (and *pro tanto* a partner) had been at a disadvantage so far as concerned the application of the surtaxes on any

¹ See below, pp. 29, 30, 34.

surplus invested by him in his business; since no surtaxes were levied with respect to corporate surplus. On the other hand the individual had enjoyed some advantage under the excess profits tax as it was framed in the act of March, 1917, and as it had been retained in the House bill; for corporations only, not individuals, were subjected to that tax. The Senate bill, in subjecting individuals to an excess profits tax, deprived him of this advantage. The question naturally presented itself whether corporations should not also be deprived of the roughly corresponding advantage which they had, or rather which their shareholders had, from the circumstance that surplus accumulations in the hands of corporations were not within the purview of the surtax on large incomes.

The problem was a difficult one because of the extraordinarily varying conditions under which corporations accumulate their surpluses. No doubt, in some cases the accumulation may be due to a design of evading, or rather of diminishing, income taxes. In other cases doubtless it is due to speculative manipulation — accumulation of a hidden surplus, known only to the insiders and expected to become the occasion for "melon cutting" at a future date. In the great majority of cases, corporate surplus is doubtless due to conservative management — the desire of providing against the uncertainties of industry or of maintaining the basis of good credit. Railroad corporations have certainly accumulated no surpluses with an eye to the consequences for income taxation, and sound public policy is in favor of encouraging rather than discouraging a moderate dividend policy upon their part. The same is probably true of most manufacturing enterprises.

After prolonged debate, and consideration of many alternatives, two provisions were inserted, in different

parts of the act, which combine to bring a satisfactory solution. On the one hand, an additional tax of 10 per cent is imposed upon any surplus left undistributed by a corporation six months after the end of its fiscal year. This tax, however, is not to be applied to surplus "actually invested and employed in the business or retained for employment in the reasonable requirements of the business" — a limitation which prevents it from standing in the way of conservative management carried out in good faith.¹ On the other hand, it is provided² that the term "dividends" shall include stock dividends; and any distribution, of whatever kind, made to stockholders, shall be taxed to the distributees at the rates of tax in force for the years in which the profits or surplus were accumulated. It is also provided that the distribution shall be deemed to have been made from "the most recently accumulated undivided profits or surplus"; that is, shall not be made to appear, by any bookkeeping entry or by any vote or declaration *ad hoc*, to have been made from the profit of some earlier date selected by the corporation. In other words, income from surplus, when finally received by a shareholder, is to be taxed not at the rates in force at the time of his receipt of them, but at the rates which were in force at the earlier date, perhaps much earlier, when the profits were accumulated by the corporation. By this device a deliberate withholding of surplus in order to escape war surtaxes is prevented, or at least becomes without object. The enforcement of the provision obviously may raise complications with regard to the rates of the surtaxes. Some retroactive application will be inevitable, and nice legal questions may arise.

¹ § 1206, (2) b.

² In § 1211, and the new section numbered 31 there added to the administrative provisions.

The income tax, as thus amended and amplified, has in many respects been improved. But it has certainly become complicated, and difficult of construction and administration. The provisions which are now in force must be sought partly in the act of 1913, partly in that of September, 1916, and partly in the war tax act. Some of the new provisions are obviously designed to be temporary; others are expected to be permanent; some may or may not remain part of the permanent system. It is obvious that an overhauling of the whole will be necessary at the close of the war, and it is extremely desirable that there should be not only a codification, but complete revision. The income tax will prove for many years to come, indeed for as long a time as we can foresee, among the largest sources of Federal revenue, probably the very largest. The task of putting it into consistent and usable shape cannot be taken in hand too soon.

VII

EXCESS PROFITS TAX

By far the most important, the most significant and most hotly debated part of the measure is that which elaborates the excess-profits or war-profits tax. From this also by far the largest immediate contribution to the public revenue is expected.

It will be recalled that the preceding Congress, by the act of March, 1917, had already levied an excess-profits tax. This, however, was at a moderate rate and on a simple plan. The rate was 8 per cent; the plan, to treat all profits in excess of 8 per cent on capital as excess profits, and to tax these at the rate of 8 per cent. The plan necessarily involved some definition of the "capital" upon which the exempt return of 8 per cent

was to be calculated. The war tax bill, as it passed the House in the current session, went no further than simply to double the rate, leaving the plan unchanged. All profits over 8 per cent on capital were to be taxed at the rate of 16 per cent.

Capital was defined in terms substantially the same as those of the earlier act, namely, to include first, cash paid in; second, cash value of property, other than cash, paid for in stock or shares; third, surplus or undivided profits; with, however, an added provision that intangible assets, such as goodwill, trade-marks, franchises, should not be reckoned at all, unless specifically paid for in cash or in tangible property.¹

The importance of the definition of "capital" obviously became greater as the rate of tax was raised. The definition of "capital" as "actual cash paid in," "actual cash value of property paid in," "paid in or earned surplus" was a device of doubtful serviceability toward assuring effective collection. On the books of a corporation its stated capital stock will appear, in the immense majority of cases, as having been paid in. A tax administrator finds it difficult to go behind the books of a corporation. On the other hand, the capitalization of most corporations has adjusted itself to their earning capacities, and a tax merely on the excess over a return of 8 per cent on capitalization would be extremely uncertain as regards revenue. It would also be unequal in its operation on different sorts of corporations, penalizing those undercapitalized and giving a virtual bonus

¹ The precise language of the House bill was: "For the purpose of this title, actual capital invested means (1) actual cash paid in, (2) the actual cash value of property paid in other than cash, for stock or shares in such corporation or partnership, at the time of such payment, and (3) paid in or earned surplus and undivided profits used or employed in the business: *Provided*, That the goodwill, including trade-marks and trade-brands, or the franchise of a corporation or partnership, is not to be included in the actual capital invested, unless the corporation or partnership made payment therefor specifically as such in cash or tangible property, the value of such goodwill, trade-marks, trade-brands, or franchise, not to exceed the actual cash or actual value of the tangible property paid therefor at the time of such payment."

to those overcapitalized. The difficulties of applying the House plan in such manner as to yield a large revenue and at the same time to deal fairly with the extraordinarily diverse kinds of corporate enterprises led to a complete change of plan in the Senate.

The change proposed in the Senate was from an *excess-profits* tax to a *war-profits* tax. It was based in the main, on the British example. A pre-war period was defined, consisting of the years 1911-12-13. The average profits for this period were made to constitute a base; profits in excess were treated as war profits and subjected to the new tax. With the change of base, there was proposed also a new method of levy; graduated steps in place of a flat rate, the graduation to take place after the method followed in the income tax. Each successive increment of profit was to be subjected to a higher rate of tax, always levied on the amount by which it exceeded the preceding increment or "bracket." While the shift to a graduated rate met with general approval, that to a strict war-profits tax encountered vehement opposition, which led finally to a complicated compromise.

The Senate proposal had one advantage; a tax on the pre-war basis was comparatively easy of administration. The profits of corporations which had been in operation during the pre-war years were on record in the Internal Revenue Office. Under the corporation tax act of 1909, they had been there recorded for the years 1911 and 1912, and under the income tax of 1913 for the third year of the period selected. Accordingly it would only have been necessary, in the ordinary case, to reckon the average profits as thus recorded, to compare with them the profits returned in the income tax statements for the year 1917, and then proceed to the calculation of the taxable excess.

Certain complications, however, necessarily had to be faced, nor was it easy to dispose of them without undertaking at some stage an appraisal of invested capital. Three types of exceptional cases called conspicuously for treatment. One was the new corporation, not in existence during the pre-war period. Another — what might be called a subnormal case — was the corporation whose profits were exceptionally low during the pre-war period. There was an obvious hardship in taxing heavily a concern which had been unprosperous during the earlier period, and whose profits during the taxable year, tho perhaps much in excess of the slender or non-existing profits of the pre-war period, nevertheless were at no high rate. The third case was the converse of the second — what might be called the supernormal case. A concern might have been extremely profitable during the pre-war period, and also profitable during the taxable year, yet no *more* profitable than before. Under a strict application of the war profits principle it would not be subjected to a war profits tax, even tho inordinately prosperous.

As first elaborated in the Senate, these complications were disposed of with an undeviating adherence to the war-profits principle. The first case, that of corporations entirely new, was to be dealt with by the device of what economists would call the representative firm. New concerns were to be taxed by ascertaining what were the war profits of "representative corporations engaged in like or similar trade or business"; their war profits were to be deemed to bear the same proportion to their net income as the war profits of such a representative concern bore to its net income. Similar treatment was proposed for corporations which could show their net return during the pre-war period to have been low as compared with the net return during the same

period of like representative concerns. No special consideration, however, was given to the supernormal cases, in the plan as first submitted to the Senate. The corporation prosperous during the pre-war period, but not more prosperous during the taxable year, was to be consistently treated as not liable to any special war profits tax. It was to be subjected to the income tax only.

Debate in the Senate itself, however, soon showed that an unqualified application of the war profits principle could not be carried through. True, it was logical, and consistent with the general principle of calling upon profits *due* to the war to pay expenses incurred *for* the war; but it roused vigorous opposition from those who could not be content to let unusual gains of any kind escape the unusual burdens. Much was said, for example, of the great tobacco manufacturing enterprises, profitable before the war and no less profitable during the war. That these and others like them should be called upon for substantial contributions to the war expenses seemed to the common man to be the dictate of common sense. A return to the House principle, that of taxing all profits in excess of a specified moderate return on invested capital, difficult tho this might be in administration, was urged as essential for a just apportionment of the general burdens. The opposition to the strict war profits plan was further strengthened by the desire of the more radical members of Congress to put on the screws more heavily in every direction, not only by increasing the surtaxes on incomes but by subjecting all excess profits of every kind to rates much higher than were proposed by the Senate Committee. In the face of growing opposition from more than one quarter, a compromise was elaborated in the Senate Committee and adopted in the Senate. By this, regard was to be had, after all, to invested capital and the rate of return upon

it. The basic amount was still to be, in general, the total of pre-war profits; but it was also provided that it should be not "less than 6 per cent nor more than 10 per cent of the actual invested capital for the taxable year." This provision might seem to suffice for disposing of the cases both of subnormal and supernormal profits. Nevertheless, a special clause was retained providing for cases in which the net return was unusually low. There was also special provision for corporations which had not been in existence at all during the pre-war period. For these contingencies — the concern with very low profits, and that which had not been in existence during the pre-war period — the device of the representative firm was still to be used in order to ascertain normal or non-excess profits.

It was in this form that the matter went into the hands of the Conference Committee — already a compromise between the two essentially different plans of levy. Protracted and doubtless vigorous discussion in the Conference Committee led to still further compromise. The provisions as finally enacted thus bear an appearance of inconsistency. The apparent or real inconsistencies or ambiguities, and many details in the phraseology of certain sections, can be understood only in the light of the history of the measure.

The term "pre-war period" is retained, and some use is still made of the profits of the pre-war period as a basis. But the application of the war-profits principle is limited to the range where the net income (profits) is 15 per cent or less on the invested capital. Within this range the tax is to be levied at the rate of 20 per cent, upon the excess over the profits of the pre-war period. But, the basic sum¹ is to be not less than 7 per cent or

¹ The term used in the act is "the deduction" — that is, the sum to be deducted from total profits ("net income") in order to ascertain the excess which is taxed. The lump sum of \$5,000 is also to be free of the tax for all domestic partnerships and individuals, and of \$3,000 for all domestic corporations.

more than 9 per cent upon the capital for the taxable year. The range within which the rigorous war-profits principle is left applicable thus becomes very narrow. And this principle, hedged in even in its application to concerns with moderate profits, is given up entirely as regards larger profits. So far as the net income on invested capital is more than 15 per cent, it is not applied at all. The method then becomes that of the House bill, namely, an unqualified tax, quite without regard to pre-war profits, upon the excess over a stated percentage of earnings upon capital. The scale, as already noted, is a graduated one; on this point there was no serious disagreement.¹ There remain, however, incorporated from the Senate bill, certain other provisions which give considerable discretion to the Treasury Department and still make possible some use of the "pre-war" basis. The device of the representative firm may still be used in case of subnormal profits, and in cases where the amount of the invested capital is not made out to the satisfaction of the Department. How important a part discretionary powers of this sort will play in the administration of the act remains to be seen.

Obviously under this scheme the definition of capital becomes of crucial importance. It is defined to include: (1) cash paid in; (2) cash value of tangible property paid for stock, with the provision that such property be reckoned at its value as of January 1, 1914, but no more

¹ The graduated rates of the tax are as follows:

20% if profits are 15% or less.			
25% on the excess over 15% and not over 20%			
35	"	"	20
45	"	"	25
60	"	"	33

It should be borne in mind that the complicated reckoning for the first 20% of tax (on profits of 15% or less) will have to be gone through for each and every taxable concern or individual; since the higher rates of tax are applicable only to the successive excesses over the stated percentage of profit.

than par of the stock; (3) earned surplus and undivided profits. The much disputed question of the allowance for "intangible" property is settled by making separate provision for patents and copyrights on the one hand, and for goodwill, trade-marks, and franchises on the other. Patents and copyrights, may be rated at their cash value at the time when paid for, even tho paid for not in cash but in stock or shares of the corporation. Goodwill, trade-marks, trade-brands and franchises may be included for the amount paid for them in cash or in tangible property. If paid for, however, in shares of the corporation, only an amount equal to 20 per cent of the total share capital may be included, and this further to an amount not to exceed the cash value at the time of the exchange of the intangible property for the shares. There is no substantial ground for criticising the definition of invested capital thus hammered out through protracted discussion. How manageable it will prove to be as a means of enabling the Treasury Department to collect excess profits according to the intent of the law is quite another question; and it would be rash to make predictions.

An unexpected result of the revision of the excess profits scheme in the Senate is the imposition of a special tax upon the incomes of individuals. As framed in the act of March, 1917, and as framed also in the House bill, the excess profits tax had been limited to corporations. Individuals and partnerships were not to be reached at all. In the Senate, for reasons which have already been explained,¹ it was proposed that individuals also should be subjected to it. The inclusion of individuals, in some form and with reasonable limitations, is incontestable, even tho, in these days of ubiquitous corporate organization, the quantitative significance of their inclusion

¹ See above, page 25.

is not likely to be great. Some theoretic difficulties undoubtedly there are in applying the principle to individuals; and on general grounds of economic analysis some limitation is desirable. In a corporation, wages of management are deducted before net profits are demarcated; salaries of managers are part of the corporation's expenses. In the case of individuals, this is not done, and even in the case of partnerships is probably not often done. The excess profits tax, as applied to individuals, therefor, bears upon larger constituents of gain than it does when applied to corporations, and is likely to become in effect more burdensome.

Difficulties of this sort would be less serious on a war profits basis than on an excess-profits basis. If the original Senate plan of a strict war-profits tax had been carried out — if the basis of liability had been the mere excess over pre-war profits — the operation of the tax on individuals would probably have been as reasonable and as equitable as can be expected of any device of this sort. The modification of the war-profits plan, however, in the act as finally passed, was so great, and the excess profits principle was so completely substituted for it, that the application of the tax to the profits of individuals presented virtually a new question, and one which, in the rush of the closing days of the session, could not be considered with much care or deliberation. It was urged that since corporations paid the tax on the excess of earnings over a given basis or minimum, individuals also should pay the tax on earnings over an analogous basis or minimum; and individuals finally were included.

The definition of the terms "business" or "trade" is expanded so as to include "professions and occupations." In another paragraph, individuals engaged in any "trade or business" — that is, including occupa-

tions or professions — are subjected to a tax of 8 per cent upon the excess of their incomes over \$6000.¹ The consequence is that labor incomes (of the higher range) are subjected to heavier taxes than property incomes of the same range. Not only the individual engaged in business and securing what the economists would call "business profits," but the physician, lawyer, engineer, salaried manager, is called upon to pay a tax of 8 per cent on the excess of his income over \$6000. That same individual, of course, is liable also to the surtaxes levied under the income tax. On the other hand, the person deriving an equal income from property is subject to the income surtaxes alone. A discrimination is made quite the reverse of that long advocated for our own income tax, and practiced in the income tax systems of most other countries — a discrimination in favor of the property income, and to the disadvantage of the labor income.

One cause of this unexpected and probably unwelcome outcome is doubtless to be found in failure to perceive that the general reasoning which underlies the excess profits tax is not applicable to labor incomes. That reasoning implies a minimum of reasonable or ordinary or normal gains; only the excess above such a minimum is to be taxed. A return of 8 per cent upon capital was treated as reasonable in the act of March, 1917; and some such figure underlies the more complicated provisions of the present act. Whatever figure is accepted, is assumed to be equally applicable to all investments of capital, equally reasonable for all. As a matter of economic theory, the assumption doubtless is open to some criticism. Industries in which risk is large, or in which the need of able management is particularly great, may be fairly entitled to a higher rate of

¹ See § 200, toward the end; and § 209.

return than humdrum industries, and the excess above the minimum or reasonable return should doubtless be calculated for them with some regard to their special conditions. But differences of this sort must perhaps be disregarded in that rough approximation to ideal justice which is alone attainable in tax legislation. A similar assumption, however, of a uniform minimum of return, applicable to all sorts of cases, is not even roughly or approximately true as regards the earnings of individuals. There is here no one level rate of return which can be regarded as reasonable or normal. An income of \$6000 for instance — the figure which has become the basic amount of this extension of the excess profits principle — is more than ample for most men and most occupations, yet far from reasonable or normal for other men and other occupations. No economist would maintain that there is an average fair rate of earnings for individuals in the sense in which there is an average fair rate of return to capital. An able physician, engineer, lawyer, manager, may receive a salary of \$20,000, and yet be earning nothing in the nature of an excessive gain in the sense in which a corporation earning 20 per cent upon its capital stock may be said to be earning excessive profits. The earnings of individuals would seem to be fairly subject to income tax only, and not to be within the purview of an excess profits tax. On these grounds of general reasoning, as well as because of the discrimination against labor incomes as compared with property incomes, the new proviso is seriously open to attack.

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THE VALUE OF MONEY

SUMMARY

I. § 1. Another formulation of the conditions governing the value of money, 38. — II. § 2. The term "value of money," 39. — III. § 3. The demand for legal-tender money, 40. — § 4. The derived demand schedule for legal tender, 42. — § 5. The separate variables in the formula; total resources, 43. — § 6. The proportion of resources kept in legal-tender form, 44. — § 7. The proportion kept in pockets and tills, 48. — § 8. The proportion kept by bankers, 50. — §§ 9, 10. The relation of the present formula to that of the equation of exchange, 52. — IV. §§ 11-19. The supply of legal-tender money under various conditions: inconvertible paper fixed in amount; partial fixity of supply; free coinage; bimetallism; seigniorage; gold exchange standard, 54. — V. § 20. Demand and supply, 58. — § 21. Production and supply of gold, 58. — § 22. Common causes likely to affect the various factors, 59. — § 23. The element of time, 61. — § 24. Possible interaction of demand and supply, 63. — VI. § 25. Conclusion, 65.

I

§ 1. THE writing of this article has been suggested by Professor Anderson's recent volume on the *Value of Money*. But the article is not directly concerned with the content of that volume. For Professor Anderson's discussion is mainly vigorous controversy, and my view is that controversy on this subject is no longer necessary. The "quantity theory" is often defended and opposed as tho it were a definite set of propositions that must be either true or false. But in fact the formulae employed in the exposition of that theory are merely devices for enabling us to bring together in an orderly way the principal causes by which the value of money is determined. As to what these principal causes are, competent writers of all schools are, I venture to think, really in substantial agreement. The logical machinery

of the "quantity theory" has set them by the ears because they have not always realized that it is merely machinery. It is as tho economists who expressed the general theory of value with the help of diagrams should quarrel with those who prefer language or those who prefer algebra. All ways are merely devices for facilitating an orderly arrangement of ideas; and, tho a debate about their comparative convenience and helpfulness is, of course, legitimate, to suppose that this debate implies any fundamental disagreement about the real causes at work would be a grave mistake. Into this mistake, as it seems to me, controversial writers about the "quantity theory" have too frequently fallen; and, therefore, at the outset I insist that, tho the machinery that I shall suggest in the following pages is quite different from that elaborated by Professor Irving Fisher in his admirable *Purchasing Power of Money*, and, as I think, more convenient, I am not in any sense an "opponent" of the "quantity theory" or a hostile critic of Professor Fisher's lucid analysis. He has painted his picture on one plan, and I paint mine on another. But the pictures that we both paint are of the same thing, and the witness of the two, as to what that thing in essentials is, substantially agrees.

II

✓ § 2. By money I mean for the purposes of this discussion legal-tender money; and by the value of money I mean the exchange value of a unit of it. The question whether it is proper to use the term value in this sense — a question which Professor Anderson discusses with great elaboration — seems to me to be concerned with linguistic suitability and to have no scientific importance. Economists in general use value to mean "exchange value," and I see no need to invent a new term.

But the "exchange value of a unit of money" cannot, of course, be left without further definition. Exchange value in terms of what? The answer, of course is, in terms of commodities. But commodities or, as some prefer to say, "commodities in general," is a vague phrase. In the chapter on "The Measurement of the National Dividend" in my *Wealth and Welfare* the problem of its proper interpretation for various purposes was discussed. For the present purpose it is convenient to adopt a plan similar to that employed by Dr. Marshall in his unpublished paper on the "Pure Theory of Foreign Trade," which has been reproduced in Professor Pantaleoni's *Pure Economics*, and to assume that the value of all commodities other than money in terms of one another is determined independently of the value of money. On this assumption, the value of any combination of commodities in general can be cited in terms of any single commodity. The aggregate of all commodities is represented by so many bushels of wheat; and the value of money by the number of bushels of wheat which a unit of it will purchase. This value is governed, like the value of everything else, by the general conditions of demand and supply. An investigation of the causes upon which the value of money depends means, therefore, just as it would do if we were concerned with lead or tobacco, a detailed analysis of these two groups of forces. To this analysis, therefore, we may at once proceed.

III

The Demand for Legal Tender Money

§ 3. In the ordinary course of life, people are continually needing to make payments in discharge of obligations contracted in terms of legal-tender money. Some

of these payments have to be made across the counter, as when commodities are bought for cash; others at some specified date after purchase, as when they are bought on three-months' bills; others at some unspecified date after purchase, as when they are bought vaguely on credit. Besides the flow of obligations that are thus continually maturing against them, most people have also a flow of claims that are similarly maturing in their favor. But the obligations and the claims that become due at any moment seldom exactly cancel one another, and the difference has to be met by the transfer of *titles to legal tender*. Under this name I include actual legal tender (for practical purposes token coins may be reckoned as part of this), bank notes, and bank balances against which checks can be drawn. If a person is unable to meet his obligations from these sources when they fall due, he will certainly be inconvenienced and will possibly be rendered bankrupt. Hence everybody is anxious to hold enough of his resources in the form of titles to legal tender both to enable him to effect the ordinary transactions of life without trouble, and to secure him against unexpected demands, due to a sudden need, or to a rise in the price of something that he cannot easily dispense with. For these two objects, the provision of convenience and the provision of security, people in general (I do not here include bankers, whose special position is discussed later) elect to hold in the form of titles to legal tender the aggregate value of a given quantity of wheat. In other words, they offer a demand price per unit for titles to legal tender equal to the aggregate quantity of wheat that they have determined upon, divided by the aggregate number of legal tender units for which titles are forthcoming. There is thus constituted at any given moment a definite demand schedule for titles to legal-tender

money. Let R be the total resources, expressed in terms of wheat, that are enjoyed by the community (other than its bankers) whose position is being investigated; k the proportion of these resources that it chooses to keep in the form of titles to legal tender; M the number of units of legal tender, and P the value, or price, per unit of these titles in terms of wheat. Then the demand schedule just described is represented

by the equation $P = \frac{kR}{M}$. When k and R are taken as constant, this is, of course, the equation of a rectangular hyperbola.

§ 4. From the demand schedule for titles to legal tender is *derived* a demand schedule for legal tender itself. The derivation is as follows. The titles to legal tender that people hold are kept in two forms, partly in actual money in their pockets and tills, and partly in bank balances. If bankers with whom these balances are deposited retained the whole of them in legal tender in their vaults, the derived demand schedule for legal tender would be exactly the same as the direct demand schedule for titles to legal tender. In fact, however, bankers only keep a money reserve equivalent to a part of the balances that they hold for customers. Hence, whereas that part of their immediately available resources which people choose to keep in cash, constitutes a demand for actual legal tender equal to the corresponding demand for titles to it, that part which they keep in bank notes and bank balances gives rise to a demand different from itself, and smaller. The magnitude of the total derived demand depends, therefore, in part, upon the choice that the general body of the public exercises in this matter. The derived demand schedule for actual legal tender is capable, like the original demand schedule, of being represented by an

algebraic formula. Let c be the proportion of his titles to legal tender that the representative man chooses to keep in actual legal tender (including token coins), so that $(1-c)$ is the proportion that he keeps in bank notes and bank balances; and let h be the proportion of actual legal tender that bankers choose to keep against the notes and balances held by their customers. Then the derived equation of demand for actual legal tender will be:

$$P = \frac{kR}{M} \{c + h(1-c)\}, \text{ or } M = \frac{kR}{P} \{c + h(1-c)\}.$$

When c and h , as well as k and R are taken as constants, this equation, like the simpler one from which it is derived, is the equation of a rectangular hyperbola.

§ 5. It cannot be denied that this formula has a somewhat arid appearance. I propose, therefore, to clothe the dry bones by a brief separate study of each of the variables which it includes. First consider R , representing the community's total real resources of commodities, expressed, for convenience, in terms of so many bushels of wheat. My formula shows that, other things being equal, the larger this variable is, the higher will be the demand schedule for money. It is, therefore, important to observe that R is likely in general to be increased by developments that bring the forces of nature more effectively under man's control; such as an increase in the efficiency of the people individually, or an increase in their collective efficiency either through mechanical inventions or through inventions in business organization. This generalization does not, however, hold good of inventions that facilitate the production of commodities for which the elasticity of demand is less than unity; for an increase in the quantity of these commodities involves a decrease in the aggregate quantity of "wheat value" in existence, and

so tends to lessen the quantity of "wheat value" that people need to keep in the form of titles to legal tender. This becomes obvious if we take an extreme case and conceive of a commodity whose quantity is increased with the result of reducing its aggregate wheat value to zero.

§ 6. Secondly, consider the variable k . When the aggregate wheat value of the community's resources is given, the quantity of wheat value kept in the form of titles to legal tender is determined by the *proportion* of his resources that the average man chooses to keep in that form. This proportion depends upon the convenience obtained and the risk avoided through the possession of such titles, by the loss of real income involved through the diversion to this use of resources that might have been devoted to the production of future commodities, and by the satisfaction that might be obtained by consuming resources immediately and not investing them at all. These three uses, the production of convenience and security, the production of commodities, and direct consumption, are rival to one another. For our present purpose, the use of immediate consumption need not be particularly considered. Its presence mitigates, but never does more than mitigate, the effect of the principal causes with which we have to deal. Practically, the critical question for a business man — and the same class of question has to be asked by everybody — is, as Professor Carver well observes: "will it pay better to have one more dollar in his cash drawer and one less on his shelves, or will it pay better to have one less dollar in his cash drawer and one more on his shelves." ¹

It is easily seen that the satisfaction yielded by successive units of resources devoted to future production

¹ American Economic Association Papers, 1905, p. 131.

diminishes as the number of units so devoted is increased. For nobody denies that the satisfaction a man obtains from the one hundredth unit of any commodity is likely to be less than he obtains from the ninetieth, and nobody supposes that production in general obeys the law of increasing return in a measure adequate to counteract this tendency and to cause the *fruits* of the tenth unit of resources invested in production to yield more satisfaction than those of the ninth. An exactly analogous proposition holds good of the satisfaction yielded by successive units of resources held in the form of titles to legal tender. So far as money is desired as a means for facilitating exchange, this is well shown in the following passage: "Some exchanges could scarcely be made at all without the use of money. In these cases the utility of money is very high, and would equal the utility of the exchanges themselves; that is, the advantage of being able to exchange, over the disadvantage of not being able to make the exchange at all. Some exchanges could only be made with great difficulty without money, in which cases the utility of money would be considerable. Some other exchanges could be made with comparatively little difficulty, in which cases the utility of money would be inconsiderable. And some exchanges could be made as easily without money as with it, in which cases the utility of money will be *nil*." ¹ Reasoning of the same general kind clearly holds good in so far as money is desired as a means of providing security. Thus the curves that represent the desire for resources to be used in production and in money respectively both slope downward; and resources will be devoted to the two uses up to the point at which the last unit of resources

¹ Carver, "The Concept of an Economic Quantity," *Quarterly Journal of Economics*, May, 1907, pp. 443-444.

devoted to each of them yields the same quantity of satisfaction. It follows that, other things being equal, the variable k will be larger the less attractive is the production use and the more attractive is the rival money use of resources.

The chief factor upon which the attractiveness of the production use depends is the expected fruitfulness of industrial activity. If a man understands that, in consequence of mechanical inventions or of an expected rise in the prices of the commodities in whose production he is engaged, a given quantity of resources invested in his business will yield an abnormally large return, he will be more anxious than he otherwise would be to devote resources to production. In the converse case he will be less willing than he otherwise would be to do this.

The factors which determine the attractiveness of the money use are more complex. The most obvious is the convenience to be got from a holding of titles to legal tender in the ordinary business of life. This partly depends upon the intervals of time at which people are accustomed to be paid for their services. If, for example, a man is paid £365 once a year, he is practically certain, on the average, to keep a larger proportion of his resources in titles to legal tender than he would do if he was paid the same amount in daily proportions of £1 each.¹ It also depends in part upon how far the organization of industry is adapted to allow the discharge of debts without resort, direct or indirect, to titles to legal tender. The importance of this consideration is well brought out in Sir Theodore Morison's account of the Industrial Organization of an Indian Province. "A very large number of exchanges," he writes, "were in old days effected by means of barter. Rents were

¹ Cf. Fisher, *The Purchasing Power of Money*, p. 84.

paid in kind, and debts between the cultivator and the money-lender, tho reckoned in terms of money, were usually settled in grain. The wages of field laborers and of the village artisans were paid almost entirely in grain, and it was therefore possible for the cultivator in former days to make a large number of transactions in the year without employing money at all. Now that the self-sufficiency of the village is being impaired, the occasions for the use of money are largely increased. The tenant usually pays his rent in money; he also employs money, along with bundles of corn, to pay his laborers; a few articles of foreign manufacture are coming into common use, which are purchased at fairs, and for them money is the only payment accepted."¹ In the modern industrial world, the tendency is, perhaps, on the whole, in the opposite direction. There seems to exist a good deal of cross trade between firms worked by means of book-debts. When a firm buys from one party and sells to another, bills drawn on his debtor are passed forward to his creditor, so that titles to legal tender are required to discharge only one bill instead of two of a given amount. There are also in vogue many elaborate devices, such as the Stock Exchange Clearing House and the Railway Clearing House, for carrying still further this method of economizing the use of bank money, while on the established settling days debts are so far cancelled that only differences have to be directly met. Against these influences has to be set the tendency to specialization of processes to different firms, involving, as it does, an increase in the number of transactions that have to be undertaken prior to the completion of many finished goods. Under the same head falls the increasing volume of speculation and other business indirectly associated with industry

¹ Industrial Organisation of an Indian Province, p. 306.

that is done on the stock exchanges, and for which, of course, a money basis is needed.

But the attractiveness of the money use does not depend only on the contribution which a holding of titles to legal tender makes to business convenience. It is also affected by another important circumstance. Any holding of titles to legal tender is always capable of being exchanged against some quantity of commodities. Clearly, if it is expected that the quantity of commodities for which, say, a note for one pound can be exchanged will be greater a year hence than it is now, the inducement to hold pound notes now is increased; and, conversely, if it is expected that a pound will buy fewer commodities a year hence, it is diminished. Thus any expectation that general prices are going to fall increases people's desire to hold titles to legal tender; and any expectation that they are going to rise has the contrary effect. For this reason the suspicion that a nation will fail to maintain or to restore the full convertibility of a paper currency, immediately lowers the demand for that currency in terms of things, and so raises prices, in terms of that currency.

§ 7. So far, of the causes that operate by way of the variable k . Consider next the variable c , *i. e.*, the proportion of their titles to legal tender that people choose to keep in actual legal tender in their own pockets and tills. The choice between actual cash and bank notes and bank balances is determined in the main by custom and convenience, and people's habits in this matter are not in all countries fixed. Thus, Professor Irving Fisher writes of recent conditions in America: "Some day in the future, when the use of checks has grown up to its work, it would not be strange if the ratio of checks to money should remain fairly constant. At present, however, we are passing through a long transition

period during which the device of using checks instead of money is being extended with prodigious rapidity. This is the dominant feature of the present situation and forms the chief basis of the forecast here attempted. All nations — even those which have used checks for generations — are making a continually larger use of checks relatively to money.”¹

Leaving aside bank notes as being relatively unimportant, we may note the following points. First, the proportion of titles to legal tender held in the form of actual legal tender will be smaller the more people have banking accounts, and, therefore, are *able* to keep their titles to legal tender in the rival form of bank balances. The more people have banking accounts the more widespread and the better organized the banking system will become. The development of branch banks and the cultivation of small accounts in turn causes the numbers of the bank-using public to increase. The chief reason why the proportion of coin to bank money used in India is so much larger than in England is that in the former country the banking system is very imperfectly developed.

Secondly, the proportion of titles kept in actual legal tender will be smaller the more readily checks are accepted in ordinary transactions — and readiness to accept them becomes more widespread as small tradesmen come to have banking accounts and high-waged employes follow their example. Thirdly, this proportion will be smaller the longer shopkeepers allow their accounts to run before requiring payment; for it is much more convenient to pay large sums by check than coin. The average size of accounts is greater, the larger the proportion of rich people in the community, — the very rich pay scarcely anything in coin. It is

¹ *American Economic Review*, September, 1912, pp. 547-548.

also greater the more widespread is the custom of paying for purchases through accounts covering a series of purchases, or through deposits paid in advance rather than over the counter at the moment of purchase. Lastly, the proportion will be smaller, the more convenient and less costly is the machinery by which payments can be made direct from bank balances, without resort to actual legal tender by the paying public. The fact that checks are subject to a small tax is relevant in this connection. Of course, if there is any question of the solvency of banks, the risk of loss, when titles to legal tender are kept in the form of bank balances, strongly favors the alternative form — an incident that in some panics, like the 1907 panic in the United States, may become of very great significance.

§ 8. There remains the variable h , that is the proportion of actual legal tender that the banking system chooses to keep against its liabilities to customers. The influences that determine this proportion are similar to those that determine the variable k , *i. e.*, the proportion of their resources that people in general (other than bankers) choose to keep in the form of titles to legal tender. Here, as there, the governing factors are, on the one hand, the convenience obtained and the risk obviated by resources held in the form of a money reserve, and, on the other hand, the advantage that is sacrificed when resources are locked up in this form. It is obvious that the advantage sacrificed is determined by that general productivity of industrial investment that has already been referred to in connection with the variable k . The convenience and security that banking reserves provide are, therefore, all that need to be discussed here. The benefit under these heads that a given quantity of resources will yield depends on the following principal considerations.

The first factor is the internal organization of the banking system for economizing the need for large reserves. Means to this end are the elaborate arrangements of clearing houses, by which cross-debts are balanced against one another, and the further device of a banker's bank associated with the clearing house in such wise that the net balances that remain over after the process of cancellation is complete can be discharged by simple entries in the books of the said bank. Arrangements of this kind not only save the use of coin directly, but also indirectly. By bringing the banks together into some sort of unity, they enable their reserves to be used at need for mutual support. This means that the aggregate reserves, instead of having to guard against the sum of the maximum separate drains that are likely to be made upon the several banks individually, need only guard against the maximum drain that is likely to be made upon the sum of these banks collectively. A much smaller aggregate reserve is necessary for the latter than for the former of these purposes. Hence a one-reserve system can be worked much more economically than a many-reserve system. The English banks as a body, because of the centralization of a large part of their ultimate reserves in the Bank of England, can safely keep these reserves much smaller relatively to their liabilities than the American banks, at all events before the recent reforms, were able to do.

The second factor is the kind of claims of which banks' liabilities are predominantly made up. If a large part of them are claims by foreign depositors, who are likely to require legal tender for shipment abroad, or by native depositors engaged extensively in foreign trade, actual legal tender — when the legal tender is also an internationally recognized money substance

such as gold—is liable to be called for in ways that no elaboration of clearing house or other devices can prevent.

The third factor is the proportion in which bankers' liabilities are in bank notes in the hands of the public or in bank balances. This is important, because in modern states the law tends to insist rigorously upon the retention of large reserves against notes, while (except in the United States) leaving the question of reserves against deposit accounts to the banks' discretion.

Lastly, account must be taken of the temperament of the people in respect of liability to panic and so on, and of the general state of confidence in the banking system. It is obvious that a new bank among an impulsive people will need to keep a larger proportionate reserve than an old and well-trying bank among an unemotional people.

§ 9. This completes the discussion by which I have aimed at clothing the dry bones of my equation of demand. It remains to explain the relation in which that equation stands to the "equation of exchange" made familiar in the "quantity theory"—an equation, by the way, which would itself be more properly described as an equation of demand. At first sight, it might be thought that the two formulae are in violent conflict. But, in fact, it is easy to show that they are perfectly consistent with one another. In order to do this, it is not necessary to complicate the argument by comparing them in their fully elaborated forms. They are both much simplified when abstraction is made of the operations of banks. When this is done, my formula

reduces to $P = \frac{kR}{M}$. It is enough to exhibit the relation between this and the corresponding simplified formula of the "quantity theory." In that formula T

represents total transactions, M the number of units of titles to legal tender, V the velocity of circulation of these units, and π the price per unit of "commodities" in money. The "equation of exchange" then is

$$\pi = \frac{MV}{T}. \quad \text{Now since } P \text{ in my equation is the price}$$

of money in terms of things and π in the "quantity theory" equation is the price of things in terms of

money, it follows that $P = \frac{1}{\pi}$.

$$\text{Hence } \frac{kR}{M} = \frac{T}{MV} \text{ or } kV = \frac{T}{R}.$$

Evidently in given conditions of production and trade $\frac{T}{R}$ may be taken as a constant. It follows that kV also

is a constant. So soon as this is perceived, the relation in which the two equations stand to one another is at once apparent. When people decide to keep half as much of their resources as before in the form of titles to legal tender, this *means* that the velocity of circulation is doubled. This has been explained very clearly by Dr. Marshall: "If a person, whether in the course of trade or for his own use, buys for currency goods and services of the value of ten thousand pounds of wheat during a year, and if he retains on the average purchasing power in the form of currency to the value of one hundred pounds, then so far as he is concerned, currency will circulate one hundred times in the year. If he keeps twice as much purchasing power, that is, to the value of two hundred pounds of wheat, then currency will, so far as he is concerned, circulate fifty times in the year, that is, only half as rapidly. Thus generally, *ceteris paribus*, any increase in the ready purchasing

power that people choose to keep will diminish proportionately rapidity of circulation, and *vice versa*."

§ 10. It is thus evident that there is no conflict between my formula and that embodied in the quantity theory. But it does not follow that there is nothing to choose between them. Mine is not, of course, any "truer" than its rival. They are both equally true. The claim that I make on behalf of mine is merely that it is a somewhat more effective engine of analysis. It focusses attention on the proportion of their resources that people choose to keep in the form of titles to legal tender instead of focussing it on "velocity of circulation." This fact gives it, as I think, a real advantage, because it brings us at once into relation with volition — an ultimate cause of demand — instead of with something that seems at first sight accidental and arbitrary. But to argue in the air about the merits of a machine is always a waste of time. I offer this specification of it in order that those interested in monetary theory may test its powers in actual work upon concrete problems.

IV

The Supply of Legal-Tender Money

§ 11. The formula set out in the preceding section refers exclusively to demand. But in order to determine the value of anything an equation of supply also is needed. What this is depends upon the substance which a country decides to use as money and the rules under which it is manufactured. The principal alternatives are as follows.

§ 12. First, the quantity of legal-tender money available at any time may be fixed, as in a country making use exclusively of inconvertible paper notes, by the arbitrary decision of the government. Under an ar-

rangement of this kind, the supply curve of legal tender is obviously a vertical straight line fixed in whatever position the government may choose. Its equation is $M = D$, where D is a constant.

§ 13. Secondly, some part of the total quantity of legal tender money may be arbitrarily fixed. In practice this is the more usual arrangement. In Germany and France, alongside of the gold currency, many old silver coins circulate as full legal tender. In Germany these amount to some twenty million pounds.¹ In the United States, "gold and silver are legal tender equally with greenbacks, or government notes issued during the Civil War, and the treasury notes issued against the deposits of silver bullion under the Sherman Law of 1890."² In Austria inconvertible paper circulates alongside of gold. Under these arrangements the shape of the supply curve is the same as it would be if the arbitrarily regulated part of the supply did not exist; but the whole curve is pushed further to the right. Its equation is $M = \{D + f(P)\}$. It is thus less elastic than it would be in the absence of the arbitrarily fixed part of the circulation.

§ 14. Thirdly, the whole of the legal tender money in the country may consist of one substance coined freely at the mint, and there may be no difficulties in the way of the import and export of this substance. In that event the quantity of legal tender available in any country in response to a given wheat price per unit is equal to the quantity of the substance in the world *minus* the quantity absorbed in other uses, whether these uses be the currencies of other countries or the arts or anything else whatever. This quantity is determined by the supply curve of the world minus the demand curves for these other uses. The supply of the world may, when

¹ Pierson, *Principles of Economics*, vol. i, p. 425.

² Kinley, *Money*, p. 50.

the monetary substance is a precious metal, be treated, for periods of moderate length, as practically constant; for the aggregate stock in the world is very large relatively to the total annual output, and, therefore, *a fortiori* relatively to such changes — themselves, from the nature of the industry, probably slow-working — in the annual output as may be induced by changes in (wheat) price. The demand for the currencies of other nations is regulated in the way described in the preceding division of this article. The demand curve for the arts depends for its shape and position, like any ordinary demand curve, upon fashion, taste, the availability of substitutes, such as silver, to fulfil like artistic purposes, and so on. It relates, of course, to the total money substance employed in the arts, and not merely to the new supplies of it absorbed into them during the year. The supply curve of legal tender in the country in which we are interested is derived from the above factors.

§ 15. Fourthly, the money may consist of two substances freely coined and bound together by some legal tie, as under bimetallism and symmetallism. From the present point of view, the principal difference between moneys of this type and the simpler money discussed above is that, since there is a larger stock of money substance available, a given rise in wheat price is likely to call out a larger additional supply than would otherwise be forthcoming. That is to say, the supply is likely to be more elastic.

§ 16. Fifthly, the money may consist of one substance coined under a seigniorage. Its supply price is then a compound of the cost of the substance contained in the coin and the seigniorage charge. Therefore, a smaller weight of coined money will be forthcoming at a given wheat price per unit than would be forthcoming if

there were no seigniorage. Let the seigniorage be £*s* per £100, and the equation of supply of the substance of which coins are made, $M = \phi(P)$. Then the corresponding equation of supply of actual coins will be

$$M = \frac{100 - s}{100} \phi(P).^1$$

§ 17. Sixthly, the supply may be regulated by an act of state, but the state may be guided by the purpose of maintaining a constant ratio of exchange between its money and that of foreign countries with which it has important trade relations. This is the familiar gold exchange standard. Under it the supply of money in the country under review is a function of the commodity (wheat) price of foreign money, falling as this rises, and rising as it falls. The value of the native money fluctuates in just the same way as it would do, if it consisted of freely minted coins of the substance used in foreign money, but its average level is somewhat lower since less of this substance is required in the currencies of the world as a whole.

§ 18. Lastly, the supply may be regulated by the state on the plan recommended by Professor Irving Fisher: that is to say, in such a way as to keep its value constant in terms, not of a foreign currency, but of commodities in general at home.

§ 19. All these various systems of supply are possible and an interesting study might be undertaken into their comparative advantages. That, however, does not fall within my purpose. Nor shall I even attempt to exhibit

¹ This implies that the wheat value of coined money under seigniorage is higher than it would have been in the absence of seigniorage, but higher by somewhat less than the amount of the seigniorage. This result is not appreciably affected by the policy the state adopts in respect of the gold collected in seigniorage. Whether the state coins it or sells it uncoined, makes no difference at all. Even should the state destroy it, the difference would be imperceptible, since the amount of it is very small relatively to the total supply.

the diverse ways in which the choice that is made between them affects the special problem of the value of money. Since this article is designed merely to elucidate a method and does not profess to be exhaustive, my discussion will be concentrated upon a single dominant system of money — namely, the simple gold standard, that put third in the preceding classification.

V

Demand and Supply

§ 20. It is a familiar proposition in pure economic theory that, when the equations of demand and supply for any commodity are given, the value of that commodity is found by their solution: or, in geometrical language, that when the demand curve and the supply curve are given, its value is measured by the ordinate drawn from their point of intersection. This analysis provides a kind of scaffolding by the help of which the causes that bring about changes in value can be investigated. But that investigation is never a simple one, and, when its subject-matter is the value, not of an ordinary consumable commodity, but of money, the difficulties to be overcome are exceptionally great. The most important of these have now to be set out.

§ 21. First, in the real world we cannot always hope to meet only with causes that act either on demand alone or on supply alone. The same cause may easily act upon both. Certain sorts of inventions, for example, may at once facilitate production generally, thus raising the demand schedule for money, and also facilitate the extraction of gold from the mines, thus lowering the supply schedule. Naturally the result is different from what it would have been if demand alone or supply alone had been affected. From a short period point of

view, a 10 per cent increase in the *production* of gold accompanied by an equal increase in the production of commodities generally, means a percentage increase in the *supply* of gold, much less than the corresponding increase in the *supply* of commodities. Consequently, the effect exercised through demand will be predominant. But, from the standpoint of an indefinitely long period, the stock of gold existing at the beginning must be insignificant compared with the quantity produced during this period. The effects upon production and upon supply are, therefore, substantially equal, and the predominance of the demand side disappears.¹ The way in which these complex effects work themselves out is not, however, my present concern. What I am interested to point out is that in the real world we may have to do, not with a one-handed, but with a two-handed cause.

§ 22. Secondly, even when the cause that is being studied acts on the side of demand only, it is most improbable that it will operate through one only of the various *foci* of causation that are distinguished in my demand formula. It is of great importance that no misunderstanding should arise upon this point. The analysis which that formula embodies enables us to distinguish and to discuss separately the principal elements out of which the demand schedule for money is made up. It provides, in short, at any moment of time a true *anatomy* of demand. But it does *not* imply that in the actual world changes in the elements that are summarized under the different letters of the formulae occur independently. It is perfectly legitimate to draw a picture of the bones of a child's body, to measure how much each bone contributes to the total height, and, if we will, even to calculate what difference would be

¹ Cf. Edgeworth, *Economic Journal*, vol. v, p. 436.

made to that height if the length of any given bone were doubled and everything else remained the same. But it is not legitimate — on the contrary it is altogether ridiculous — to proceed on the assumption that, as a matter of fact any one bone will double in length while all the others remain unaltered. For we know that in growth there is a certain harmony and that many of the changes that occur in any one part are the result of general causes that affect other parts also. This is true of the economic body no less than of the human body. A general industrial expansion does not involve merely an expansion of resources — a growth in the variable R . It also involves the establishment or extension of banks and banking facilities, and this means that the proportion in which people use bank money relatively to actual legal tender is increased, or, in other words, that the variable c is diminished. Nor is this all. Industrial expansion, since it carries with it larger real income, may easily involve an increase in the proportion of their resources that people choose to keep in the form of titles to legal tender; for a very poor man cannot afford the luxury of money in hand. If this happens, the same cause that has brought about an increase in the variable R , will have affected the variable k in the same sense. Yet, again, k (the proportion of their resources that the public keep in titles to legal tender) and h (the proportion of actual legal tender that bankers keep against their liabilities) are obviously liable to be affected by common causes. A boom in business confidence lessens, whereas a general apprehension of panic increases, both of them. These connections are, of course, set out merely as illustrations, and do not profess to be exhaustive. They may suffice, however, to drive home the point that the different letters of my demand formula do not represent channels each of them reserved, as it

were, for the separate action of special private groups of causes. They are rather public channels along all of which a single cause may operate at the same time.

§ 23. Thirdly: when it has been ascertained that the demand schedule has been modified in a definite manner, the resultant effect upon the value of money is not a single thing. If the quantity demanded at a given price is doubled, the supply schedule relevant to immediate effects will not be the same as that relevant to later effects. The change in demand introduces a *series* of changes in the value of money, extending over a long period and different at each moment of that period. To the question how the value of money will be affected, no intelligent answer can be given without reference to the time that is supposed to have elapsed since the change occurred. This point is easily illustrated. The immediate effect of a fall in the demand for legal tender — we are supposing that the legal tender substance is gold freely coined — is, of course, to reduce its value in greater or less degree. But, so soon as its value has fallen, a reaction is set up by way of foreign trade. Gold having become less valuable relatively to goods in one country — say England — foreigners are stimulated to send goods to England as a means of purchasing gold, and to take out a greater proportion of their debts in the form of gold. In this way the supply of gold is diminished, and the reduction in its value that was brought about at the first shock is partially cancelled after a comparatively short time. But this is not the only reaction. After a somewhat longer time, the fall in the value of gold will lead to an increased use of that metal in the arts of the world as well as in the currencies of foreign countries. This again obviously checks the fall in the value of gold. If the elasticity of the arts demand is given, the extent to which the presence of

that demand checks the fall is clearly greater the greater is the normal consumption of the money substance in the arts relatively to its consumption in the currency of the country affected. If the consumption in the arts is given, it is greater the *more elastic* is the arts demand. Nor is even this all. After a still longer interval, the fall in the value of gold may be expected to lead to a restriction of the industry of gold mining, which the fall will have rendered less profitable. It must, indeed, be recognized that this circumstance acts in a way somewhat less direct than is sometimes supposed. Thus Professor Fisher writes: "It is often taken for granted that, as soon as the gold production begins to subside, the price level will begin to subside also. This is a gross error. The price level does not depend directly on the *rate* of gold production, but on the *stock* of gold and other money. The question is not one of an increasing or decreasing annual production of gold. The inflowing stream of gold is of significance only as it affects the contents of the reservoir into which it flows. A lake does not cease rising the instant the freshet filling it reaches its maximum flow. The lake will still continue to rise *so long as the inflow continues greater than the outflow*. This is often long after the inflow has passed its maximum."¹ Nevertheless, of course, in the end the check to gold output checks the fall in its value.

The above three influences all take a certain time to work themselves out. The first is perhaps more rapid than the second, and is certainly more rapid than the third. It would be convenient if we could rigidly separate off periods relevant to each of the three, and say, for instance, that in the first month, the first only would operate, after three months the second, and after four

¹ American Economic Review, September, 1912, p. 536.

months the third. This, of course, we cannot do. The influences are partly synchronous and partly successive. Their collective effect is that the supply schedule against which the changed demand impinges displays greater and greater elasticity the longer the period over which the effect of that changed demand is being calculated. It follows that that effect is likely to be most considerable at first, and thereafter to be gradually reduced.

§ 24. Lastly, account must be taken of the fact that the demand schedule and the supply schedule for money are not strictly independent of one another. Hitherto, I have tacitly ignored this fact. To do so is in accordance with the practice of economists in their preliminary exposition of the general laws of demand and supply. It is usual to write the equation of demand $p = \phi(x)$ and the equation of supply $p = \psi(x)$. But of course all economists are aware that, when the element of time is taken into account, a change in the equation of supply may react to alter the equation of demand, and *vice versa*. After a period of liberal supply, people may have become so accustomed to some commodity that the demand schedule is raised to a higher level than it occupied before; and, conversely, after a period of keen demand, economies of production may have been developed that will set the supply schedule at a lower level than it formerly occupied. This is the familiar doctrine of infant demands and infant industries. It is not susceptible of translation into demand and supply curves, because three variables are involved, but there is no difficulty about expressing it in algebraic formulae. The reason that more prominence is not given to it in economic textbooks is that, for a large number of problems, abstraction can be made of it, and greater simplicity thereby attained, without any great

loss of accuracy. But all economists know that for some problems it is of great importance. There is reason to think that one aspect of it — reaction of supply changes upon the position of the demand schedule — has considerable significance for monetary theory. First, it is not improbable that a large increase in the supply of money might permanently lower the demand schedule by diminishing the proportion (c) of their titles to legal tender that people choose to keep in actual cash. That this is likely to happen is suggested by Professor Cannan in the following passage: "Nor do I think that, if the sovereign would only buy what is now half a sovereign's worth of goods, the currency would be doubled; at present my average holding of gold is about £5, and with the rise of prices supposed, it might increase to £6 or £7, certainly not to £10, since I should prefer to go oftener to the bank for cash than I do now rather than to carry double the amount of gold about."¹ If Professor Cannan is right the reaction which he anticipates would, of course, cause a given increase in the supply of money to reduce its value more than it would do if there was no reaction. Secondly in some circumstances a large increase in the supply of money, by making money relatively cheap in terms of things, may give bankers an opportunity to render the basis of credit more "solid" by building up larger proportionate reserves. There is reason to think that this effect followed in some degree upon the large gold production that took place during the fifteen years preceding the war. A development of this kind means, of course, an increase in the variable h and therefore a rise in the demand schedule for money. If it takes place, a given increase in the supply of money will cause the value of money to fall *less* than it would do if this reaction were lacking.

¹ *Economic Journal*, September, 1910, p. 396.

VI

Conclusion

§ 25. This completes the summary analysis which I proposed to myself in writing this paper. Anyone who has followed it up to this point must, I think, agree, whether or not he is in accordance with the argument set out, that the elements upon which the value of money, and changes in that value, depend are so numerous and complex that *some* technical device for holding them together in order is absolutely essential. To tackle these problems without tools is like going into a modern battle unhelmeted and unarmed. The "quantity theory" furnishes a tool which in the skilled hands of Professor Irving Fisher has accomplished great things. But less experienced craftsmen need, I think, a better — a more completely fool-proof tool. It is this that, in the preceding pages, I have endeavored to provide.

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THE CONCEPT OF NORMAL PRICE IN VALUE AND DISTRIBUTION

SUMMARY

"Primary" value theory and distributive theory call for the same formulation of the market price concept but for different conceptions of normal price, 66. — Contrast of market price and normal price points of view, equilibrium between *amounts* vs. between *rates* of flow, 68. — Limitations; meaning of cost of production, 72. — Clark's "Static State" the same concept as Marshall's long-period normal price of consumption goods, but incorrectly applied to distribution, 73. — This concept applicable in "sub-distribution," which is practically more important than the theorist's division of income into general shares, 84. — Criticism of Marshall's equilibrium levels of wages and interest, 89. — Conclusion: Marshall's theory a correct logical definition, but applicable to reality only as determining a "tendency" which may be overcome by other tendencies; contrast with Clark; contrast with Mill, 95.

THE present paper is an attempt to examine, clarify and make precise the meaning of normal price, with especial reference to differences in the way in which it is to be defined in the two leading classes of price problem with which economic theory deals. It will be shown that in what may be called primary valuation, or the valuation of consumption goods, normal price must be defined in a way which has no valid application to the case of secondary valuation or distribution, the valuation of productive services.¹ It is the writer's belief that a clear distinction of issues and points of view in

¹ Superficially viewed, there seem to be three valuation problems in economics instead of two, relating respectively to consumption goods, productive services (the "usance" — Fetter — or rent of such agencies) and the sale price of the agents themselves. (Durable "consumption" goods are really production goods, as Fetter emphasizes.) But since the sale prices of productive goods are a function of the rate of interest, directly by capitalization in the case of land and indirectly through adjustment of production costs in the case of reproducible capital goods, it is necessary to consider but the two.

this field will remove one of two causes of confusion which explain much of the apparent disagreement among theorists, and will resolve into wars of words a large part of the lamentable controversies over fundamentals which still characterize (and discredit) the science.

The other source of confusion — to digress for a moment — is the pernicious concept of utility dragged into economics by Jevons and the Austrians. When two obvious facts about "utility" are kept consistently in view, it will be seen that it is an ethical category and can have no place in a descriptive, quantitative science. The first fact is that utility is a function of scarcity, and the other is that it is purely relative. Most writers see both, "off and on" as it were, but occasional failures to see them are very disastrous. That only relative utility can be dealt with scientifically at all is generally recognized. But if this be granted it becomes clear that the facts comprehended in the demand curve, in terms of price or willingness to pay money, are all that are left which can be measured or discussed. The only conspicuous effect of the introduction of utility as a concept distinguishable from demand at a price is that few economists know much of the time whether they are speaking in terms of exchange values or of some wholly unformulated ideal of absolute well-being. It is necessary to clear thinking in this field to recognize that when we go beyond alternatives as they are and preferences as they are, we have passed from the realm of fact to that of what ought to be; we have crossed the line which divides economics from ethics, and can then proceed only in the light of a tenable concept of absolute value; there is no intermediate position. It is a good sign that the mathematical economists, of the Lausanne

school especially, are giving up the utility notion and separating economic science from utopia architecture. The others will follow.

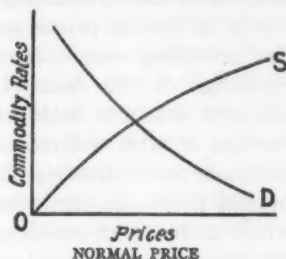
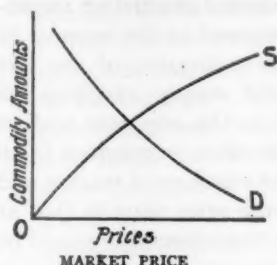
The discussion which follows will largely relate to and be based upon the work of Dr. Alfred Marshall, undoubtedly the most thoro and careful study yet made in this field, and that of Professor J. B. Clark, who has made current in his "static state" the same notion as Marshall's normal price.¹ A comparison of Marshall's and Clark's uses of the concept will be found especially useful in bringing out the issues. Taking the simpler problem first, we may begin by considering the meaning and significance of the normal price concept in the theory of prices of consumption goods. As contrasts and comparisons of this field with that of "distribution" will frequently recur, the former will for the sake of brevity be referred to as "primary valuation," both being, of course, valuation phenomena.

The general theory of price and the relations of market price and normal price can most easily be expressed by the conventional demand and supply curves. These apply, without alteration of form, to both analyses, but the interpretation is significantly different in the two cases. The two figures are precisely alike, and on both the horizontal distances have the same meaning, representing the scale of prices of the commodity,² but the

¹ I pass over entirely the "natural value" of Wieser, which of course is similar in nothing but name to the "natural price" of the classical economists or modern normal price. Wieser's book seems to me to be a thoroly muddled attempt to argue in terms of utility without so much as attempting to define the term. In any case its assumption of a communistic state or an equal distribution of purchasing power has never achieved any general recognition as a successful logical device for building up a coherent body of value theory.

² It should be noted that I have interchanged the positions of the price and the supply and demand axes, compared with the usage of Marshall and of American textbooks. It is more natural and more correct to think of price as the independent variable and treat demand and supply as functions of price, as is done in the mathematical analysis of Cournot and the Lausanne school.

vertical distances represent different conceptions of supply and demand. The market price analysis portrays the situation in a market at a particular instant of time. It is a momentary or cross-section view of the really continuous economic process. An ordinary market is of course to be thought of, such as the wheat



pit in the Board of Trade, where a particular commodity is for sale for money. The demand curve, *D*, shows by its ordinates or vertical values the *amounts* of the commodity which buyers would be willing to take at the time at the various *prices*. The supply curve, *S*, similarly shows the amounts which would be offered for sale.

Both curves are hypothetical representations of the situation at a moment. *If* such a price, *then* such a demand or supply, all other things equal, is the meaning, not that the functions will vary in this relation in time which does not follow at all. The price point, corresponding to the intersection of the curves, is simply the price at which the amount offered will be the same as the amount taken. The action of competition by which price is actually adjusted to this point is familiar and need not be gone into. It is not quite permissible to assume that in fact exchanges will take place at only one price, but this is the ideal result which

is approximated more closely as the operation of the market is more perfect.

The normal price analysis, graphically represented by the same diagram, shows the continuous process, and is in this respect the more realistic of the two. Demand and supply are now to be taken as *potential continuous rates* of consumption and production respectively, at various prices, as opposed to the *amounts* in the preceding case.¹ A clear separation of the two meanings of the demand and supply variables, as absolute amounts or blocks in the one case and as streams or rates of flow in the other, is essential to an adequate understanding of the relations of market and normal price. In the latter the price point is that at which under given conditions the commodity would be produced and consumed at the same rate. Why it is normal, or stable, is obvious at once. Goods cannot long be consumed more rapidly than they are produced, and will not long be produced faster than they are con-

¹ Marshall of course saw this difference very clearly, and points it out repeatedly. Thus he speaks of the supply or demand as a "flow or (annual) amount" of the commodity, and at several points inserts the phrase "in a unit of time" or its equivalent (see pp. 343, 345, etc.). He has, however, a way of making the distinction parenthetically, and does not always make it at all. Only once, I think (in the footnote on page 344), does he use the word "rate." He nowhere brings together and contrasts the two points of view, nor does he use the graphs at all in his analysis of market price. It seems to me an error in exposition not to emphasize this difference in viewpoint. Many writers (as well as readers) have failed to see it, and have been led into confusion by their failure.

At one point I think Marshall's treatment involves definite error. Matters are needlessly complicated, and as it seems to me the psychological facts at the same time misinterpreted, by recognising the utility of money as a quantity subject to variation (p. 334, § 3). From the scientific point of view it must be treated as an absolute, because it is the point of reference from which alone the purely relative magnitudes involved become quantitative at all. Any other view carries us at once into an evaluation of the values of one individual by those of another, or by some absolute standard, which is unavoidable in the normative sciences of ethics and aesthetics, but will not do in a descriptive science of economics. The only tenable view of utility is that of *relative utility per unit*, which makes it merely synonymous with demand-at-a-price. Economics is a science of markets, and in a market it is absurd that any unit of any commodity should have to an individual in his right mind a greater importance than that of any other commodity unit for which it can be exchanged at will. The utility notion adds nothing to that of value and should be abandoned, and with it such concepts as total utility (in any other sense than value) and consumers' surplus, both of which, if not entirely illusory, are at least irrelevant to economics as the science of exchange values.

sumed. If the adjustment were perfect, the quantity of goods actually in the market at any time would be negligible; they would merely flow through the market, coming in and going out at the same rate. The existence of an appreciable stock is the consequence of the fact that the adjustment is generally imperfect, and it serves to cushion the shock of deviations from normal conditions and to smooth the price curve in time.

The word *potential*, again, in connection with demand and supply in normal price is quite as important as the word *rate*. The normal price is that at which production *would* exactly equal consumption, which it only rarely and accidentally does in fact. The curves show the rates at which consumption and production *would* take place at varying prices, *other things being equal*. Strictly speaking, other things cannot be equal. Any actual readjustment of the consumption or production of any commodity by way of bringing its price closer to the normal point or otherwise, must obviously involve changes in the consumption and production of other commodities, and ultimately affect practically the whole economic system. Thus one price cannot be normal unless all other prices are so, and normality is really a condition of the whole system.¹ Hence these curves tho they represent processes involving time, must not be thought of as showing concomitant variations in time; each portrays merely the hypothetical relation between its two variables (price and consumption or production), *under given conditions*. It does not follow that when one of the variables *does* undergo change the other *will* change correspondingly, because many other things may happen in the meantime, and some other things necessarily will happen.

¹ As in the system of normal equilibrium of the mathematical economists.

But when as in the study of primary valuation we are considering a *single commodity*, relatively unimportant in comparison to the whole field of demand and supply, and a *restricted range of price fluctuation*, remembering that outside redistributing effects are spread over virtually the rest of the entire economic system, these secondary changes do not produce great distortion in the curves. They may therefore be neglected without involving considerable error, and the curves taken as showing the character of the relation between the two variables at the time.¹ This qualification will be found to be of fundamental importance in the discussion of distributive theory, where a very different situation is met with.

The curve of rates of supply is a cost of production curve. Under competition, goods will be produced at any price at the maximum rate at which they can be produced at that price; a slower rate would lead to abnormal profits, and a more rapid one to losses. What is not always so obvious, however, is that this fact generalized for the system means merely that productive services (like incomes) tend to distribute themselves among competing lines of employment in such a way as to bring in equal returns or have equal "specific importance" in all of them. The hackneyed principle that normal price is the cost of production, or that prices tend to equal the cost of production, is really just another way of stating the self-evident truth that the natural adjustment of production as a whole is that adjustment in which every productive agency is put to its most profitable use or divided among competing uses in such a way as not to be more highly paid in one than another. Cost of production is merely the money

¹ Speaking with logical precision, it is only for an infinitesimal distance each way from the actual price at any time that the curve is entirely valid; it shows only the direction in which the function begins to vary.

value of the uses of productive agencies embodied in a thing, and these values are fixed by the competition of all the uses to which the services may be put. Hence equality of value and cost is equality of remuneration of the productive services in the commodity with what they would receive in other employments. Of course not all the productive services entering into any commodity have or need to have an equally good competing use; but in so far as the price of the commodity is determined by competitive production, some part of its supply is dependent upon the use of some agency to which this condition applies, and this is true of practically all commodities. If it could be generally seen that equality of price to cost is merely alternative phraseology for the fundamental axiom of rational conduct, the distribution of limited resources to equality of remuneration in all uses, the perennial wearisome controversies over cost of production, whether it is cause or effect of price, etc., would certainly cease; for in the light of this obvious truth they are in fact so much meaningless verbiage.

What the potential rate of production is, at any price, at any moment, depends on the length of time hypothetically to be allowed for readjustments.¹ Two important and fairly distinguishable cases are recognized by Marshall whose theory we have followed, and whose definition of normal price we may now compare with the static state of Professor Clark. After stating

¹ We may neglect the effect of this consideration on the side of consumption, since here readjustments will require time only to the extent that consumers hold stocks of goods bought in advance and subject to limitations in the time of consumption, which may be assumed to be very small.

It follows that the rate of consumption is dependent on the rate of production, rather than the other way. Many economists are vehement in their insistence that demand is causal, and production effect; it is natural to think of it this way, and it is true, in a teleological sense. But the readjustments which tend to bring a situation toward the normal when it is divergent from it, originate on the supply side. The normal price adjustment is an adjustment of production to a demand *schedule* which remains unchanged, tho of course the consumption of the commodity changes.

that in discussing market price, supply means the stock which is "on hand, or at all events 'in sight,'" he says:¹ "As regards *normal* prices, when the term normal is taken to relate to *short* periods of a few months or a year, supply means broadly what can be produced for the price in question with the existing stock of plant, personal and impersonal, in the given time.² When the term normal is to refer to *long* periods of several years, supply means what can be produced [meaning again "the rate of production possible"] by plant, which itself can be remuneratively produced and applied within the given time; while lastly, there are very gradual or *secular* movements of normal price caused by the gradual growth of knowledge, of population, and of capital, and the changing conditions of demand and supply from one generation to another." Marshall's discussion, so far as published, deals mainly, as he goes on to say, with the second meaning of normals. At another place (p. 347) he describes "natural" value (referring to Smith and the early economists) as "the average value which economic forces would bring about if the general conditions of life were stationary for a run of time long enough to enable them all to work out their full effect."

Marshall's second or long-period meaning of normal price is identical in all respects with that which Professor J. B. Clark employs under the name of the "static state." "What are called 'natural' standards of values and 'natural' or normal rates of wages, interest and profits are, in reality, static rates. They are identical with those which would be realized if a

¹ Principles of Economics, p. 379. References are to the sixth edition.

² "In the given time" here should mean that the supply spoken of is a *rate* of supply possible at the end of the given period, other things equal; it is inaccurately expressed.

society were perfectly organized but were free from the disturbances that progress causes." The static standard is defined by supposing "that all dynamic influences should cease at once, while static laws continue to operate for an indefinite time."¹ The "dynamic influences" are very explicitly enumerated: increase of population, accumulation of capital, improvements in industrial methods, improvements in business organization, and multiplication and refinement of wants. Marshall's list is nearly the same tho not quite so complete; he shows more reluctance to stick rigidly to heroic hypotheses, as when in his working definition he fixes the period of readjustment at "several years," tho in another place as noted, he also defines it as unlimited; he has not yet published a discussion of the "secular changes" of an elaborateness of detail equal to Clark's discussion of his corresponding "dynamic state" as given in his two volumes. But the ground covered is the same and there is no important difference between the two formulations of the idealizing hypotheses.

It is, therefore, remarkable to find that fundamentally different use is made of the same idea by the two authors. With Marshall it applies exclusively to what we have called "primary valuation," the sale prices of things, especially consumption goods. When he comes to the discussion of distribution, the prices of the usance or rent of productive agents, he does not employ the concept as thus defined at all. On the other hand, it is precisely in connection with distribution, and here alone, that Clark does make use of it. He treats of primary valuation only in an incidental way (in his earlier work in which the static state hypothesis is elaborated), and when he discusses value it is a

¹ The Distribution of Wealth, pp. 29, 429.

modernized pain-cost theory that he gives us.¹ An examination of this contrast in viewpoints will throw light on some of the fundamentals of distributive theory. It will lead to the conclusion that Marshall's usage is the correct one, while distributive theory calls for a different formulation of the normal price concept. But first it is necessary to make clear the contrast between the two points of view of market price and normal price in the field of distribution, where they have been still less adequately distinguished than in primary value theory (in fact hardly distinguished at all in any definite way) and where still worse confusion has resulted.

The theory of the *market prices* of productive services is somewhat more complex than that of consumption goods, but not different in principle, and is fairly well worked out in the marginal or specific productivity analysis.² The demand for productive services being indirect, we have on this side of the relation to take account of "diminishing technical productivity" as well as "diminishing utility" (in the product) in drawing the demand curve. More correctly stated, we have the problem of proportioning factors of production in making different individual products combined with that of proportioning products in consumption. No

¹ Chap. 24. It should be added that in his later work, "The Essentials of Economic Theory" (chaps. 6 and 7), Clark gives a much more comprehensive analysis of value. This does not imply any criticism as to the "soundness" of the one referred to above. It is quite true that a part of the supply of most commodities is marginal on the ground of "pain-cost," and in this sense "pain" determines value.

On p. 29 of the *Distribution of Wealth*, Clark connects the terms "natural value" and "natural wages and interest" in a way which clearly commits him to the view that the underlying theory is the same in the two cases. See above, p. 74 for the quotation. The application to primary valuation is made a little more explicit in *Essentials of Economic Theory*, chap. 7, esp., pp. 120, 121.

² There is some objection (even that not well founded) to the use of the word "productivity," and some difference of opinion as to the meaning and application for practical purposes of the distributive theory called by this name. There is, I take it, no real disagreement among economists of repute as to how the mechanism of competitive distribution actually works.

particular comment is called for here, except to emphasize the fact that the question is exclusively one of proportions in both cases, which is not always adequately recognized.

On the supply side there is more to be said. The specific productivity theory (as formulated by Professor Clark ¹) completely neglects the variability of the supply of productive services with their price at a moment, or treats it as completely invariable, which it is not quite justified in doing. It is true that the supply of any particular kind of material agent is given at a moment, and that generally speaking the whole supply will be employed at maximum capacity independent of price. The supply in a particular use is of course indefinitely variable with price, depending simply on adaptability. But in the case of labor and free capital, as groups or funds, there is some, tho a very limited, variability with price in the amount available, even at a moment. A few laborers may be on the margin as to whether to work at all or not, depending on the wage offered, and many will probably work more or less intensively and for a longer or shorter day. In a similar way, a larger or smaller share of the disposable surplus income in the society at a moment may be supposed to be available for investment uses at higher or lower interest rates.

It is to be insisted upon, however, that the possible variation here is small. The supply curve is not quite a horizontal straight line (vertical on the usual form of diagram), but is very slightly inclined. The form of the curve at any considerable distance from the actual current price point is a matter of pure speculation, is of no significance, and should be left out of account. The

¹ Marshall is more careful here also. *Principles* (9th ed.), Mathematical Appendix, note xiv, esp., pp. 849, 850.

situation in regard to general wages or general interest is of this sort. Not only is the supply at a moment extremely inelastic, but the demand is almost indefinitely elastic. The result is that no possible change in either can in a short time cause any considerable change in price. This we know to be true; general wages and the pure interest rate change very little and very slowly.

But as a matter of fact, *general wages* mean relatively little anyway, and general interest perhaps not as much more as is sometimes supposed. Significant practical questions relate rather to particular kinds, or to agencies in particular uses. From this standpoint we can say of labor or any other sort of productive agent that the elasticity of both demand and supply at a moment depends mainly on its degree of specialization. And since it matters not at all what may be substituted for any agency in any use, labor, land, and capital goods and all kinds of each replacing each other with all possible degrees of facility or difficulty in different situations, we have but one general market price law of distribution. Under free competition, the income imputed to any kind of productive agency, in any use or in general, is such that the demand and supply of productive capacity in that use, or of that kind in general, are equal. Of course the competitive remuneration is the marginal or specific product of *the amount employed*, but the variability of this amount with the price itself must be taken account of in a complete and correct explanation of price. The principles involved are evidently identical with those governing the market prices of consumption goods. From this point of view, the traditional classification of productive agencies into the "factors" land, labor and capital (goods) is without significance and misleading. The

interest problem does remain distinct, but only because free capital is not a *separate* productive agency.¹

More important and more difficult is the problem of *normal prices* of productive services or the problems of normal wages, rent, quasi-rents (returns on particular kinds of capital goods — Marshall's term) and interest, (the return on loaned free value funds). The points calling for notice in the present limited discussion will be exclusively on the supply side. Little question will in any case be raised as to treating the demand for productive services as a function of their price over long periods and with other things equal; at least this procedure is as valid here as in the case of consumption goods. The crucial problem of normal price is that of normal supply — and of reactions of supply changes upon *conditions of demand*, but this will appear in time. We may therefore eliminate land from the discussion at once, since it has by definition no conditions of supply at all.² The distributive category designated

¹ Professor Davenport is right in attacking the traditional classification of the factors (Economics of Enterprise, chap. 22), but unfortunately fails to recognize the limitation as to the market price viewpoint. It seems, however, that he does not acknowledge the validity of any other viewpoint. We shall see that for the normal-price problem, the classification, except for the confusion of capital and capital-goods or interest and quasi-rent, is valid and necessary.

² Into the controversy as to whether land should be separated from capital goods or included in one class with them, we need not go deeply here. The question seems to be the common one of when a difference in degree becomes a difference in kind, and the answer to depend on the purpose for which the classification is made. The difficulty of identifying and measuring agencies or qualities in agencies which are really invariable in supply with changes in price (as land must be defined if it is to be recognised as a separate category) will bring the term back into our discussion at a later stage (p. 96, note).

In this connection it is appropriate to note that it is the normal-price point of view which brings into theory the classification of productive agencies into the "factors" land, labor, and capital (-goods). At a moment, as just observed, there are all degrees of complementarity and competition between agencies of all kinds, depending on the circumstances, and only one principle of distribution can be recognised; this is the principle of specific productivity, which is merely a different formulation of the principle of rent, as Hobson and Clark especially have pointed out. But the conditions of continuous supply do differentiate the traditional three classes of productive goods in the most definite way (assuming that there is such a thing as "land"). Land has no conditions of supply at all, a fixed quantum of it being given by nature; capital goods (which is the meaning of "capital" as a productive agency) are freely reproducible in the same way as ordinary consumption goods; while in the case of laborers, tho the supply is variable and

as "quasi-rents" may also be passed over. In the long run and under competitive conditions these will be simply the rate of interest on the cost of producing the goods which yield them. There are left labor and free capital, or wages and interest, which involve serious problems of normal price.

The essential points for present purposes in these problems can be brought out by reverting to the contrast between Clark and Marshall. Taking up first the view which is held to be incorrect, we shall now show why the concept of the static state, or long-time normal price, as used in primary valuation theory, is inapplicable to the problem of distribution. After which, an examination of Marshall's own theory of normality in the distributive shares (not expressly so called by him) will indicate that it also is subject to serious modification and limitation.

The fallacy involved in the application of the static analysis to distribution theory is in brief that the hypotheses defining the static state explicitly fix the supply and demand of labor and capital arbitrarily at the amounts available at the moment the hypotheses are made; and since the major premise of all normality reasoning is that prices must be functions of supply and demand, the prices are thus at the same time arbitrarily fixed, and hence neither can in any proper sense be called "natural." There is manifestly no similarity

is connected with price in several ways, the connection is of an entirely different sort from that which obtains in the case of things commercially produced for profit.

It is noteworthy perhaps that a similar division can be made of consumption goods, but this is not generally done in any definite way, simply because two of the classes are relatively unimportant. Most by far of consumptive wealth is subject to free reduplication under commercial conditions. But there are such goods which are not reproducible at all (analogous to land) as for example the "Old Masters," and meteoric stones which gave trouble to earlier economists. Examples of the third class are still harder to find, but they exist. Products turned out mainly for the amusement of the makers in spare moments, or still better those made in institutions to keep the inmates occupied, illustrate the genus; these are analogous to laborers in that their supply is variable but only indirectly connected with their price.

between a stability arbitrarily imposed in this way and a natural stability due to the variable being in a position of equilibrium. If the "five dynamic changes" are eliminated, or the "fundamental conditions of life" remain stationary, the rates of interest and wages can never move from the (market-price) position they were in when this condition was imposed. Given a static population with static wants, and given also a static condition of technology and business organization, there can be no change in the demand for capital or labor, while the assumptions of a static population and no accumulation of capital explicitly preclude all changes in the supply; hence the price must remain stationary. There can be no chance for movement toward a position of natural equilibrium, if one could be defined, for there can be no movement at all; and certainly these conditions cannot define such a position. It is surely not permissible to impose conditions which fix the prices in question at the accidental present rates, and then define as normal the prices that "will result" under these conditions.

This of course is not just what Professor Clark aims to do. The answer to the criticism would be that at the moment when the arbitrary conditions are imposed capital and labor are not getting the amounts which the demand and supply would fix, that a part of this sum, in a dynamic society at any time, is going to entrepreneurs in the form of profit. Under the static assumptions then, the redistribution of profits is supposed to bring interest and wages to a new and higher level, which is the normal sought for.¹

¹ *Distribution of Wealth*, p. 407. "On any particular day, we can say that static law governs society, establishing for workers a rate of pay that is higher than the actual rate; [and similarly for capital, p. 410] . . . the standard of pay for labor [and capital] at this moment is what the actual pay would be, if we were to stop all dynamic changes and let the fruits of the changes that have thus far been made convert themselves into additions to wages and interest."

But this reasoning involves a fallacy, or at least a very improbable and wholly inadmissible assumption, which also strikes at the root of Professor Clark's whole theory of profit. His theory involves the conception of profit — "pure profit" or that which is not reducible to wages and interest as a net aggregate distributive share, automatically created for the benefit of entrepreneurs by the operation of the "dynamic changes." Now it is evident that this will not do; the industrial system does not have quite this benevolent solicitude for any particular social class, and if it did, the competition for positions in the class in question would have to be radically dealt with.¹ In the first place, it needs but to be pointed out that changes as such cannot give rise to profits at all; in so far as any change can be anticipated its effects will be capitalized in advance and no profit will accrue. The change, to create a profit, must be *uncertain*, and if an expected change fails to occur, profits will accrue in the same way. It is uncertainty, the possibility of change occurring or not occurring, or the unpredictable character of its consequences if it does occur, and not change itself, which creates profit.

Furthermore (and this is really another aspect of the same fact) unexpected occurrences (and failures of

¹ This may seem unfair inasmuch as Clark emphatically credits the entrepreneur with being himself the cause of dynamic change or of industrial progress, and treats profit as his remuneration for this activity. (*Distribution of Wealth*, p. 411). But in the first place there is only one of the enumerated changes (improvement in business organisation) that can be attributed to the entrepreneur, or possibly two, if we fix our attention on the application of advances in technology rather than on invention. And even here it cannot well be contended that there is a decided tendency for the profit resulting from an improvement to fall into the hands of an individual entrepreneur solely responsible for making it. More fundamental, however, is the obvious fact that if the profit to be realised from an improvement can be foreseen, competition will reduce the profit to wages and interest at the usual competitive rates on the outlays of labor and capital necessary to bring about that improvement. Such wages and interest in dynamic operations being the same in amount and determined in the same way as those received in routine activities, there is no apparent reason for calling them by a different name. If "pure profit" only is kept in view, it cannot be treated as a reward for dynamic activity. It is uncertainty or unpredictability, not change as such nor activity as such resulting in change, which gives rise to profit.

expected ones to occur) create losses as well as profits. The actual situation is a strong competition in the business of anticipating the course of change and making adjustments to future conditions. The business men with superior foresight, or better luck, make gains, those with poorer foresight or luck, suffer losses. Profit arises out of the nature of the entrepreneur organization of industry, the concentration of uncertainty in a small economic class through the contracting for the uses of productive agencies at fixed prices in advance of the sale of their products, amounting to a distribution of income before it really comes into existence. It is connected with what some writers have called "successful risk-taking," a term more descriptive than explanatory. Whether there is any such net aggregate share as profit in society as a whole, will obviously depend on whether business men at the time when they contract for the use of productive agencies on the average over- or under-estimate the returns which they will ultimately realize from their use. If on the whole and in the long run they are more pessimistic and timid than the facts warrant, profit on the whole will be realized; if they are optimistic or rash, loss will result.

What the facts of the case are it is of course impossible to determine accurately. But when we consider the stimulus of the competitive situation, the influence of other than economic motives and the general rule in the psychology of speculation and gambling under such conditions, it seems more probable *a priori* that the net result is a loss rather than a gain, and the better opinion seems to be in favor of this view. The sum of the incomes received by entrepreneurs as a class probably does not quite amount in the long run to rent, interest and wages at competitive rates for the produc-

tive services which entrepreneurs as a class furnish to industry (outside their pure entrepreneur function). The static adjustment would make additions to wages and interest at some points, but it would make subtractions from them at others, probably fully equal if not greater in aggregate amount.

The same reasoning applies to any hypothetical transfer of income from the wages category to that of interest, or in the reverse direction. There would be such transfers on a large scale in the course of the static readjustment, undoubtedly; but it is wholly inadmissible to assume that there would be an appreciable net balance either way. It cannot be argued that the "static rates" would vary significantly either way from the actual rates at the time the assumptions were made.

Before leaving this subject it should be pointed out that there is a field of distribution in which the static hypothesis of normality is applicable and significant.¹ That is in the more minute subdivision of income, the rates of pay for particular kinds of laborers and capital instruments ("capital" in different "forms"). Here there would under Clark's assumptions be much readjustment and significant changes in rates of remuneration, leading to a "normal" rate for each laborer or agency which is of much more concern to him, or its owner, than any theoretical changes in general levels, because the pay of any one agency at any time depends much more on this subdistribution of income than it does on its division into the primary shares. But it is the theory of the general levels that economists treat under the head of distribution, and here there would be no important change.

¹ Cf. *supra*, p. 78, on the subject of general wages and general interest.

Marshall with his characteristic caution, amounting at times almost to vagueness, does not lay down universal principles of distribution; he discusses the problems of interest and wages separately, each on its own merits, and I think does not even expressly apply the term "normal" in any technical sense to either of them.¹ But as he has defined normal price to be the condition of stable equilibrium of demand and supply, and since he does explicitly recognize this condition, it is fair to use the terms "normal wages" and "normal interest" to characterize his equilibrium rates. After a fair and careful discussion of the connection between the supply of labor (quantity and quality) and wages (Bk. VI, chap. 2, §§ 2, 3), he concludes in perfect Ricardian style (p. 532) that "a rise in its [labor's] demand price increases the supply of it," that "there is a certain level of the demand price which will keep [the supply] stationary," and that consequently, "wages tend to retain a close tho indirect and intricate relation with the cost of rearing, training and sustaining the energy of efficient labor." Similarly in regard to interest: (p. 534) "... a strong balance of evidence seems to rest with the opinion that a rise in the rate of interest, or demand price for saving, tends to increase the volume of saving. Thus then interest ... tends towards an equilibrium level such that the aggregate demand for capital in that market, at that rate of interest, is equal to the aggregate stock forthcoming there at that rate."²

Perhaps the difficulties in this position may best be approached through an inquiry respecting the parallelism of the definition of normality in this case and in

¹ The phrase "normal wages" in the Table of Contents referring to Bk. VI, chap. 2, §§ 2-4, apparently means merely "ordinary," "general," or "average" wages.

² There follows an important paragraph of qualifications and limitations partly along the general line of my criticisms.

that of primary valuation. What, we may ask, are the conditions which must be assumed under which the variables are to work themselves out toward the position of equilibrium? It is evident that normality must be a condition which the phenomenon studied "tends" to approach, and arrived at which it would tend to remain stationary. That prices do not at once move to the position of normality and stay there is due to some sort of "disturbance," which if we are to understand and use the concept it must be possible to identify and so define the normal in terms of hypothetical conditions under which it would be reached, as was done in the case of primary valuation. There must be, in short, "dynamic changes" to be eliminated or "fundamental conditions of life" to be held stationary, while a readjustment under the influence of more constant and universal economic forces takes place resulting in a "natural" or "static" condition of industry as a whole. The argument has shown that these idealizing assumptions must be different in this case from those previously used, but as some concept of normality is necessary in distributive theory also, to place it on any sort of scientific basis, it is important to fix the meaning of the concepts employed and their function and application.

It should be recognized first of all that it is the changes in phenomena which stimulate our scientific interest and call for explanation. The operations of the scientific intellect are all reducible to formulating the unknown in terms of the known, which I suppose is equivalent to saying the formulation of change in terms of the unchanging. Now the changes in the values of consumption goods are relatively short-period changes, and the readjustments of productive arrangements to price changes are also quickly effected, while the read-

justments in consumption practically do not require time at all. These changes are in fact principally dominated by the shifting of demand from one field to another and the corresponding shifts of productive activity. Only in a degree so small as to be negligible in comparison are such (primary) price changes due to any permanent alteration in the demand for commodities or in the productive capacities of society viewed as wholes. The serviceable hypothesis of idealization for primary value theory is therefore a natural or ideal distribution of the existing fund of social productive capacity in relation to the existing total fund of demand in the society. Since in reasoning teleologically, as we properly do in economics for the most part, the demand schedule is the ultimate independent variable, it is to be taken substantially as it exists at the moment, tho it is wise to abstract from momentary and capricious fluctuations or smooth the curve as far as practicable. General changes in demand,¹ or in conditions of supply, even if they can be found and described, are still outside the sphere of purely economic reasoning, since the demand schedule cannot itself be viewed as depending upon price.

The same reasoning holds good in what we have called sub-distribution, the determination of the income of particular laborers, machines, acres of land, etc., or the remuneration of agencies of narrow classes and in particular uses. Fluctuations here are indeed so intimately connected with changes in the values of consumption goods as to be virtually phases of the same phenomenon; the conspicuous changes are the result of re-distributions and not changes in totals.

¹ Changes in *conditions of demand* or in the demand schedule, or total price-paying disposition in the market are of course meant. The current terminology is ambiguous, "demand" being used to designate this concept and also the actual consumption at a given price. The distinction is fundamental in this discussion and it is hoped that the terms have been used so that no confusion need result.

The "normal" returns to particular kinds of labor or to capital in particular uses should then have the same meaning and be defined with reference to the same static assumptions as in the case of primary values, which is to say those already discussed, eliminating changes in the general levels of the distributive shares.¹ In both cases, moreover, it seems highly desirable to differentiate the meaning of normal in accordance with the time to be allowed for readjustment, as Marshall does in his short-time and long-time views, and as Clark fails to do in any definite way. The importance of this lies in the fact that if a new condition of affairs is temporary, there will be little or perhaps no tendency to make the static readjustments which would bring the situation to the corresponding normal; hence very different standards have to be used in the study of long-period and short-period fluctuations.

The distinction between long-period and short-period changes is also fundamental to the problem of formulating static hypotheses for the definition of normal distributive shares in the ordinary, broader sense of general wages and interest. Here a very different situation confronts us in the enormously greater extent of the changes that are to be studied and of the

¹ This problem of what I call "sub-distribution" has not received attention at the hands of economists in proportion to its relative practical importance — tho here again Marshall should be distinguished for having gone very far in the right direction. This is the phase of distribution with which the business man or owner of productive services is almost exclusively concerned. Even the owner of money or "free capital" lent for investment has it in concrete property to whose market vicissitudes he is rarely indifferent. The general levels of interest, wages, etc., seem to have more appeal to the scientific interest of the theorist, men's incomes are determined in by far the greater part, over periods in which individuals are interested, by the other sort of (re-distributive or sub-distributive) considerations. In addition, the general levels are extremely hard to define satisfactorily (cf. Marshall) and finally, those slow changes which they undergo are largely dominated (as we shall presently show) by extra-economic forces.

It seems to the writer that Professor Cannan has inverted the relative importance of distributive problems in his distinction between "pseudo-distribution" and distribution proper" (in his *Theories of Production and Distribution*, chaps. 7 and 8). In addition his "wages per laborer," etc., do not go far enough in recognizing that it is the particular, concrete worker, machine, acre, etc., that we are interested in, more than typical or average cases.

time intervals over which they extend. These incomes, the prices of labor and capital usance, vary little in short periods of time but are subject to changes which are gradual and indefinitely continued. This means that the actual levels of these prices may at any time be relatively much farther from the normal, in terms of the time naturally required to effect the readjustments involved.

The consequence is that the assumption underlying all normality reasoning, the drawing of hypothetical demand and supply curves in terms of price, with other things supposed unchanged, is here hardly admissible. It could be used in the case of consumption goods only because the fluctuations are rapid and one commodity nearly negligible in comparison with all the rest of the system. In distribution also, instead of the hosts of kinds of consumption goods, we are dealing with two or at most three "commodities." And still further, the inter-relations of the demand and supply functions of the commodities we are now concerned with, labor and capital usance, are of a peculiarly intricate and vital sort.

The conditions to be held constant in order to realize natural or normal prices for the services of laborers and of capital can, as for consumption goods, be none other than the conditions of supply and demand of those commodities.¹ Now as soon as the question is clearly put, of treating the supply and demand of capital and labor as definite functions of interest and wages respec-

¹ The terminology here is confused, as we have no word for the services of capital corresponding to labor, the services of laborers; also from the fact that "labor" is used as a collective term for laborers as well as to designate their services. Demand for either capital or laborers as such is really meaningless, for capital is virtually a quantity of free value, and laborers are not bought and sold. However, we shall for brevity use the expressions demand for capital and labor, meaning the services of capital and of laborers. The supply of capital usance may be treated as identical with that of capital, but in the case of labor we must consider variations in capacity and in intensity of activity in addition to the question of numbers (as Marshall does).

tively, the difficulties are brought into view. This will pass in the case of demand (consumption, not conditions of demand), *other things equal*, and Marshall's argument that the supply of labor and capital tend to increase with an increase in wages and interest, *other things equal*, is also fairly convincing;¹ but what are the "other things" that must be equal? It develops at once that they are principally the supply and demand of capital and labor themselves. Any change in any of these functions by way of approach to its normal relation to price completely upsets the form of the other functions, and then that of the first one to vary, and so on without end, and there is hardly a real approach to an equilibrium condition at all. These reactions are by no means negligible here, as in the case of consumption goods, where changes in the price of one do indeed produce small changes in the conditions of supply and demand of others but do not appreciably disturb the tendency to a definite equilibrium.

Take the case of the supply of labor. Passing over the more immediate difficulties, let us suppose that it tends to be a function of the wage level, as Marshall argues; what is the normal supply at a given wage, and what are the given conditions? Following the classical writers, tho with more careful reservations, Marshall, as we have seen, views the cost of producing laborers or of laboring capacity as the determining factor. Of course the connection between the "cost" and the supply in this case is quite different from that of the commercial cost of production of things made for profit, but the result might be much the same. But since it is the standard of living, which must operate to keep this functional relation unchanged, the standard

¹ This is not well stated; as it stands, it presupposes a normal state of things when the change in price takes place. In general terms, the supply tends to increase more rapidly or decrease less rapidly with an increase in price, and vice versa.

itself must obviously remain unchanged with changes in price (wages), and we know that it will not.

However, if the standard of living itself were a definite function of price, of such a character that it tended to move to meet the latter, as it were, there would be a point of stability, tho with the relations much more complicated. In a progressive society something of this sort seems to take place. If the psychological minimum which controls the supply of laborers is below the scale of living of the actual wage level, population tends to increase, lowering the wage and scale of living, and at the same time the minimum standard of living tends to rise. Thus the position of equilibrium will be reached more quickly than if the psychological standard had remained stationary, and with wages at a higher level. The normal supply of labor is thus in some sense an indirect function of price. And it is not quite correct to say that the standard of living, even the psychological standard, fixes normal wages; rather the normal wage is that at which the actual scale of living and the psychological minimum would be the same, with still other things held equal. The character of the function is uncertain even in the best-studied progressive societies and wholly problematical elsewhere, especially for retrogression where we have almost no concrete data. The ideal situation might be represented by intersecting curves in the same way as demand and supply or utility and disutility (i. e., varying proportions of desirable alternatives) in the individual economy.

To the extent that the standard of living is a determinate function of the wage level, there is nothing inherently impossible in a theory of normal wages, tho the situation is indefinitely complicated. But we have mentioned still "other things" which must be kept

equal. The supply must be allowed to adjust itself to a fixed demand schedule. Now in the case of labor it is obvious that any change in the supply directly involves a change in the demand. The number and productive power of laborers in large part constitutes the demand for their services; and it is impossible to apply such an analysis under such conditions. In addition, the amount of readjustment necessary and the rate at which it is likely to take place are important factors. Since these are such that a considerable time may be required to reach the normal condition, i. e., the divergence from normality great and the rate of change in supply induced by given divergence relatively slow, the probability of still other things entering into the situation and affecting the result is correspondingly increased.

The fundamental importance of these considerations is demonstrated by a glance at the historic facts. I assume that the problems we are interested in studying are those furnished by the world in which we live, that is modern industrial civilization or conditions in western Europe and lands peopled therefrom or adopting its culture since the Middle Ages, and especially since the industrial revolution. Here the psychological minimum has been continuously far below the actual scale of living (the wage level) as is proved by the fact that population has steadily increased. That is, the theoretical normal wage has been *below* the actual level, and wages should have tended to fall. We do not know how long it would take the increase in population and rise in the psychological standard to come to the position of equilibrium at any moment if the conditions of demand themselves would remain stationary. We do know that in relation to the speed with which the conditions of demand undergo change from other causes

this interval is great enough to permit these "other things" to overcome and reverse the theoretical downward tendency of wages. Instead of falling they have risen rapidly, when the period as a whole is taken into view.

A slightly different situation of the same general character is met with when we turn to the problem of normal interest. Here also, and to a much more pronounced degree, the normal level of supply corresponding to other existing conditions at any instant has always been far above the actual, as is again proved by the fact that the actual demand has never failed to call forth increasing supplies; hence the theoretical normal rate of return has been and remained indefinitely below the actual rate. It would be idle to guess at what rate of interest new accumulation of capital would cease. We do know here, however, that the demand for capital at low rates, even without change in the present demand function itself, would be indefinitely great, and also that industrial progress is constantly creating new demand besides. In the case of interest, the change brought about by the increase of capital itself is different from that of labor in a very interesting way. An increase of capital changes in the positive sense *both* the conditions of supply and those of demand of capital! Increased capital investments mean new income, and new purchasing power is new demand for products, and so for the "factors" entering into them. At the same time a rise in the income level means a decrease in the burden of saving and an increase in the rate at which capital would be forthcoming at any particular interest rate. At the same time, also, on the demand side, increased investments have the opposite effect, using up and taking out of the market investment opportunities, presumably the best available

ones first at all times. Moreover, it is certain that even without any "dynamic change" at all, a long period of time would be required for sufficient capital to accumulate to reduce the interest rate to the point where accumulation would cease. That is, the normal position is always a long way off and there is unlimited room for "other things" to get in their deadly work.

The whole situation is still further complicated, and the results of the normality reasoning made subject to further discount by the inter-relations of the supply and demand of capital and labor. Labor and capital may compete as well as complement each other. An increase in the number of laborers is an increase in the demand for capital as well as for labor. An increase in the supply of capital, besides constituting a new demand for labor, will, since some of it must be supposed to accumulate in the hands of laborers, raise their scale of living and thus react on the conditions of supply of labor. This effect would be greatly magnified by such a situation in regard to labor as we have just noted, an actual wage above the normal, actual scale of living well above the psychological minimum, and resulting ease of saving on the part of laborers. The very fact of either the wage or interest level being divergent from the normal, as well as the effects of change in either, greatly distorts the supply and demand functions of the other commodity, and nearly or quite deprives its theoretical normal of its significance. There is hardly an end to the reactions and interactions of changes in these functions, but there is no need to follow them out in greater detail. They make it clearly inadmissible to treat the demand or supply of either capital or labor as a determinate function of its price, as normal-price reasoning of the usual type requires, and hence to

define a normal position of equilibrium of supply and demand.¹

But this is not yet all. In addition to the interconnections among these functions themselves, the "still other things" which must also be assumed to remain unchanged are likewise tied up with price changes, and cannot be assumed to remain stationary while the latter change. If these could in turn be resolved, into definite functions of price, i. e., if they were connected in determinate ways, this would not be an unsuperable objection theoretically, tho the number and relations of the functions might well offer a manifestly impossible problem for solution. But even this much is not true. We have seen in the case of the psychological standard of living, that it must vary when the wage level changes, but it is impossible to say in just what manner. The same applies to the relation between population and the effective labor supply, and still more to the connection between population and the demand for labor and the supply and demand of capital.

When we turn to the other three "dynamic changes," the development of wants, and the progress of technical invention and industrial organization, the case is yet more hopeless. It is evident that these are connected with the price situation, but the precise character of the connection is clearly beyond determination. There might conceivably be an "equilibrium point" in terms of price, a theoretical price at which improvement would cease, for these also, but we cannot use such a hypothesis. They are tied up with economic

¹ All this assumes, too, that the usual assumptions are sound as to the psychological principles involved in the laws of change in supply. It would be outside the scope of this paper to undertake a criticism of these psychological assumptions, tho the task is an inviting one. A few of the more obtrusive of the commonly overlooked features of the situation in the case of capital saving have been referred to in my article in the *Quarterly Journal of Economics* for February, 1916 (pp. 279 ff.).

progress in general, but no man can say how; they cannot stand still while other readjustments take place, yet we cannot tell definitely what will happen to them. Their connection with price prevents our leaving them out of account as "extra-economic considerations," and yet we cannot take them into account because we cannot ascertain their laws of change. And they are relatively so important as elements in our problem that results which do not take account of them are not worth much.¹

Much of this reasoning applies in principle, as we have seen, to the theory of normal prices of consumption goods, but owing to the different conditions and somewhat different nature of the problem, such considerations do not nullify a positive and rapid tendency toward a definite equilibrium. Now it will be seen that changes in supply of the productive factors give rise to changes in the theoretical supply schedule and therefore in the normal price of consumption goods — Professor Clark's "dynamic state" and Marshall's "secular changes in normal price." With the productive factors in their normal adjustment, and other prices in harmony with them, the latter would be normal in a different, more ultimate sense than the theoretical normal relative to the actual prices of productive services at a moment. This leads to the idea of a kind of economic absolute, or state in which there

¹ One of the most conspicuously "dynamic" factors in the progress of industrial civilization has been the discovery and development of new natural resources, which is also clearly an ultimate condition of supply of everything else. It is not included in Professor Clark's list, nor mentioned by Marshall. It is theoretically possible to treat this under the head of capital, that is, to view it all as a matter of saving and investment, under competitive conditions, of resources already in existence. In the face of the facts, however, this procedure has a strong flavor of unreality, not to say of the fantastic. The "production" of land no doubt tends to approach the character of deliberate capitalistic enterprise, like the erection of buildings or creation of any other productive agency; but in its earlier stages it is hardly in this category. It is surely not scientific economics to treat in this way the voyage of Columbus or the expeditions of the missionaries into the American interior, if even the more ordinary pioneering.

would be no tendency to change of any kind. But our argument has made it sufficiently clear that such a hypothesis is devoid of practical meaning. The effects of the progressive changes of society on the prices of consumption goods are too uncertain to work with; in most cases we could not tell what sign or direction such changes would take. Even the definite goal of the changes in regard to conditions of production itself must be left out of account. The reasoning in regard to normal distributive shares is useful and necessary; but it must be taken as relating only to *tendencies* at any time, and not mapped very far ahead, much less followed out to any ultimate goal.

And in the field of primary valuation, the significant view is that of static or normal price with these things supposed fixed in the state they are in at the moment. Dynamic movements or secular changes are separate problems of little practical significance here. It should be seen, however, as Marshall apparently fails to do, that this problem of secular changes in normal "primary" prices is identical with that of normal levels of the distributive shares. At any rate, tho his analysis is not altogether inconsistent with this view, he does not point out their identity, while Professor Clark's treatment involves definite confusion of the relations involved. His theory of normal price in the distribution field must be rejected, tho it is applicable to the practically more important problem of subdistribution, the normal remunerations of particular agencies, or labor and capital in particular uses. Clark's own position, as more fully developed in his *Essentials of Economic Theory*, is in fact a definite argument against the reality of any normal level of the distributive shares, an argument for perpetual progress.

In this respect there is an interesting contrast between Clark's "static state" and the "stationary state" of Mill, which is in fact a theory of normality in distribution, as the former is not. The "static state" is a mere logical expedient which the author's main argument is an attempt to prove could never correspond to the facts. Mill, on the other hand, thought of the stationary state as an imminent reality, not an arbitrary supposition but a naturally static condition on the verge of which society always hovers.¹ If this were descriptive of reality, the theory would constitute a basis for a theory of normal wages and interest, which would be valid in a sense and to a degree which it cannot be as the facts stand. The conception of society as always hovering on the verge of a goal which always flies before us, however, shows the operation of "other things," supposedly outside the pale of economic analysis. About these Mill was not very explicit, and we have seen that in fact they cannot properly be left out of account as non-economic in character.

As the foregoing analysis has necessarily been somewhat intricate as well as long, a brief recapitulation of its main contentions may be useful. Logical thinking is possible only through abstraction, and if economic theory is to have the status of a deductive science, some formulation of ideal tendencies in the competitive process is necessary. The more important concepts needed are a simplified view of the situation in a market at a given instant and a cross section of the whole economic system viewed as a process in time, showing the theoretical final equilibrium of the forces at work. The first is supplied by the theory of "market price" and the second by that of "normal price," both of

¹ Principles of Political Economy, Ashley edition, p. 746.

which have always been recognized in the literature of the science, but are still in need of more precise definition and distinct separation, especially in the field of secondary valuation or distributive theory. Distribution is found to call for the same conception of market price as primary value theory; the current analysis is defective in neglecting the limited but real variability of the supply of productive services with price at a moment, and in seriously underestimating the potential elasticity of demand under actual conditions.

In regard to normal price, quite different formulations of the idealizing hypothesis are necessary in the two branches of value theory. Normal primary values, or prices, properly assume as fixed the existing conditions of supply of productive services (as well as the ultimate conditions of demand in the society). Normal prices here are those which would result from a natural distribution of existing resources in relation to the existing demand. But to apply this assumption in the field of distribution, is obviously to preclude any natural readjustment whatever, an error which appears to be involved in the definition of the "Static State" of Professor Clark and to necessitate its rejection as a working concept of normality.

A critical examination leads to the conclusion that it is impossible to lay down conditions under which the supply and price of productive services should approach a static or equilibrium level. The conditions of supply and of demand are too closely inter-related; the amount of readjustment necessary is too great and the rate at which it naturally takes place too slow; and not only are the "extra-economic considerations" from which abstraction must be made relatively potent and quick in action, but finally and most important, they are not really extra-economic, but yet cannot be reduced to

price functions; they are tied up with price in indeterminate ways and can neither be neglected nor theoretically taken into account. It is not possible to assume that certain elements of the situation are to remain fixed while others adjust themselves to them. Marshall's equilibrium levels of wages and interest are therefore valid only as definitions of conditions under which equilibrium *would* obtain. The concept is useful and necessary, but must not be taken as giving an indication of the goal or even the direction of actual change. It follows that the concept of normality in the distributive field cannot be validly used in formulating theories of a more ultimate normality, or even of "dynamic movements" or "secular changes" in the prices of consumption goods.

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VALUE THEORIES APPLIED TO THE SUGAR INDUSTRY

SUMMARY

Recent reports on the sugar industry. The industry both agricultural and manufacturing; may be used to test the theories of marginal cost, representative firm, large and small scale production, 101. — Analysis by cost curves showing cane (or beet) costs, factory costs, and total costs, 105. — Analysis by coefficients of dispersion, 108. — Analysis by Pearson's formula for correlation, 111. — Analysis by frequency histograms and probability curves, 116. — Conclusions, 120.

THE publication of government reports giving facts and statistics in regard to industries in the United States affords good opportunities for testing the teachings of economic theory. During the present year two such reports have appeared relating to sugar — one on the beet sugar industry, prepared by the Federal Trade Commission, and the other on the cane sugar industry, prepared by the Department of Commerce.¹ The work on these reports has been thorough and painstaking and the data collected are believed to be accurate. The reports give details in regard to the agricultural and manufacturing processes, some insight into the conditions of labor, and a careful analysis of costs. There are also numerous statistical tables relating to almost every phase of the subject.

It is the publication of such statistical tables which affords the economist his opportunity. The sugar

¹ Report on the Beet Sugar Industry in the United States: Federal Trade Commission, 1917. The Cane Sugar Industry: Department of Commerce, 1917. Both reports, tho published in 1917, describe conditions as they were in 1914. The fact that they refer to this earlier period makes them the more valuable for testing economic theory, since the situation was then not abnormal, as it has been since the outbreak of the European War.

industry is partly extractive and partly manufacturing. According to theory, therefore, it should illustrate, on the one hand, the phenomena of varying cost and producers' surplus, and, on the other hand, uniform cost and the "representative firm." Both phases of the industry are carried on by firms differing greatly in size and, therefore, should show differences in the economies of large and small scale production as applied to agricultural and manufacturing operations. It is the purpose of this paper to find out by the use of modern statistical methods to what extent these predictions of economic theory are verified.

It would be well first to have before us, stated in definite form, just what, on the basis of theory as ordinarily understood, we should expect our statistical treatment to show. We will then be able to see clearly to what extent our expectations are verified or fail to be verified, and, finally, we will attempt to make the necessary limitations and qualifications of theory to account for such discrepancies.

A little more than half of the world's supply of sugar is obtained from the sugar cane and a little less than half from the sugar beet. The sugar cane calls for a tropical climate, as the maximum sugar content is not obtained until it has been growing for over a year. It also calls for abundant rainfall and certain characteristics of soil. These conditions are realized more or less perfectly at various points within a belt extending about the earth between the thirtieth degrees north and south of the equator. The sugar beet, on the other hand, requires a temperate climate, much sunlight but not too intense, considerable moisture when the beets are young, very little or none when they are maturing and storing up sugar. While, therefore, the areas upon which sugar may be produced are widely distributed,

the peculiar conditions most favorable for its production are somewhat limited; and, the demand being strong and steadily increasing, it becomes necessary to resort to soils and climates less and less favorable to its production.

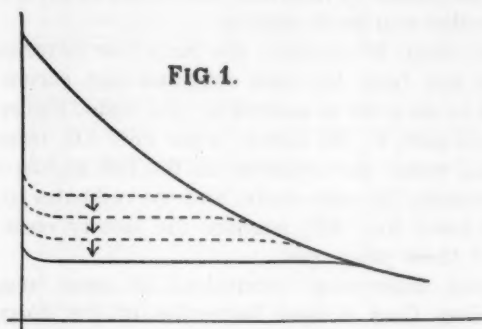
Under such conditions we should expect the sugar industry on its agricultural side to exhibit the phenomena of commodities produced at varying cost. We should expect the supply curve for both cane and beet to be of the ascending type, with the price — allowing for freight differences and tariffs — near the cost to the marginal producer, thus yielding to more favorably located producers economic rent. A frequency graph constructed from the same data should show considerable dispersion. Still, one can easily imagine conditions when there would be a high degree of concentration. For example, a country in which there was only a small amount of "best" land and marginal land used in the industry, while the great mass of the product came from moderately good land of uniform productivity. Again, a frequency graph might under some conditions be closely fitted by a normal probability curve, or there might be a decided "skew" to the right or the left. On the whole, however, we should expect a greater degree of concentration in costs in a manufacturing than an extractive industry.

When we come to the manufacture of sugar from the cane or the beet we are dealing with a highly capitalized machine process. On the basis of theory, therefore, we should expect the line of costs to be of the horizontal type. And as the industry is in the hands of numerous competing producers the concept of the representative firm would be expected to apply. This would be indicated by a dip in the line of costs at one end to represent the cost of production to the "supermen" who reap a

certain amount of "rent of ability," and an elevation at the other end to represent the costs to the new, struggling, or moribund firms. But the line throughout the greater part of its extent should be approximately horizontal, the ordinates measuring the cost to the "representative firms," which cost determines the price.

It may be objected that since the factory processes are of the machine type, the cost of production should decrease with an increase in the output, and that therefore the curve should descend to the right, the typical form for production under conditions of "decreasing cost." But it must be remembered that the descending type of curve introduces a time element. It may be defined as the locus of the right hand extremity of a bodily-descending, rightward-lengthening, horizontal line. Or rather, introducing the concept of the representative firm and admitting some degree of difference in the costs of production, the bodily-descending line would not be straight but, as explained above, would be in the form of a reversed curve, the greater part of whose extent was an approximately horizontal line. At any given instant of time the line plotted from data of costs should be such a reversed curve. Whether the high or low end of the curve appears at the right is simply a matter of arrangement of data. If we draw an analogy from the case of increasing cost, where the marginal cost, represented by the ordinate at the extreme right, determines the price, it might appear more logical in the case of decreasing cost, to place the low end of our reversed curve to the right. For altho it is the cost to the representative firm which determines the price today, it is the cost to the "captain of industry" of today which is likely to determine the price tomorrow. The concept of this paragraph may be graphically symbolized as shown by figure on page 105.

If a frequency graph were constructed from the factory costs it should show great concentration about the cost to the representative firm. We should rather expect a fairly close approximation to the bell-shaped normal probability curve. However, there might be a



"skew" to the right or left as there chanced to be at the instant of taking the data a considerable portion of the product derived from firms inferior or superior in their efficiency to the representative firm.

Finally, since it has generally been held on grounds of theory that agriculture is a field favorable to small-scale production, while manufacturing is favorable to large-scale production, we should expect in the cane and beet industry the low-cost firms to be the smaller firms, while in the factory processes we should expect the low-cost firms to be the larger firms.

Such are the conclusions of theory. When we come to a statistical study of the data we find the results so similar from all four¹ sources of supply — even in the

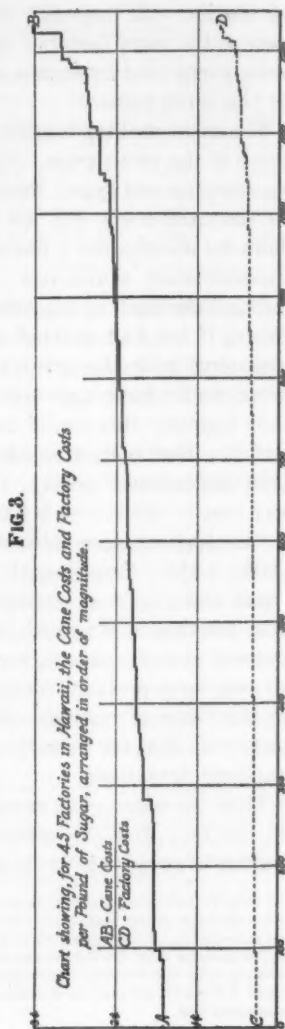
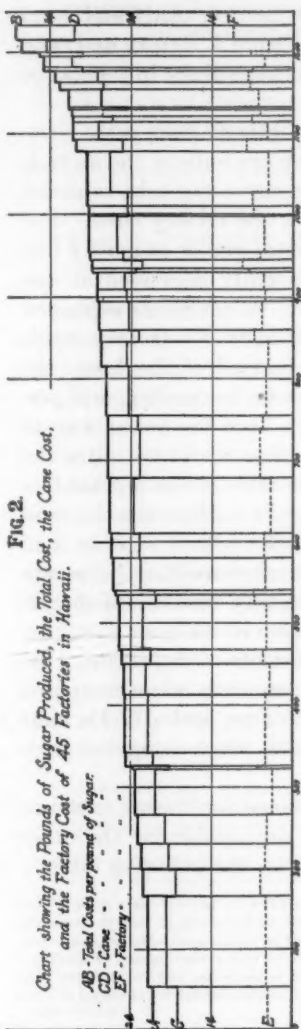
¹ Other important sources of the sugar supply for the United States are Louisiana, Texas, and the Philippines. No data were obtainable from the Philippines, and the data from Louisiana and Texas were lacking in details essential to the purposes of this study.

case of beet sugar as distinguished from cane sugar — that any one of them may be selected for purposes of discussion. We will select for chief emphasis Hawaii, because of the detailed and scientific methods of accounting by the Hawaiian producers, and submit, with but little comment, diagrams illustrative of conditions in the other sources of supply.

First, then, let us take the forty-five factories in Hawaii and from the data construct cost curves arranged in the order of ascending total costs (Figure 2). The ordinates to the heavy upper line, AB, measure the total costs; the ordinates to the full middle line, CD, measure the cane costs; and the ordinates to the dotted lower line, EF, measure the factory costs for each of these producers.

Several interesting conclusions at once suggest themselves from a mere inspection of the diagram. (1) The cane cost is a much more important element of the total cost than is the factory cost. (2) Both the cane costs and the factory costs differ widely among themselves. (3) The ascending line of total costs suggests the conditions predicted for an industry subject to the law of varying or increasing cost, and the line of cane costs approximately parallels the line of total costs. (4) The line of factory costs, however, shows little tendency to parallel the line of total costs. It zigzags across the figure above and below a nearly horizontal line. (5) On the whole, the low-cost factories with respect both to cane and factory costs appear to be the large factories.

The diagram (Fig. 2) represents the factories arranged according to total costs. We may segregate cane costs and factory costs and arrange each of these in order of magnitude and plot corresponding diagrams. Such a treatment appears in Figure 3. In Figure 2, any verti-



cal section will intersect the factory, cane, and total costs of the same factory: in Figure 3, factory and cane costs intersected by such a section will not in general be for the same factory.

The most striking feature of this diagram is the similarity of the two curves. They are both of the ascending, varying cost type. Such a curve was to be expected for the cane costs, but not for the factory costs. For them we anticipated a horizontal line or at most a line approximately horizontal — slightly depressed at one end and elevated at the other. Of course, as explained above, if we had plotted our data for factory costs, beginning with the greatest instead of the least, the curve would have appeared to be descending, and perhaps logically this would have been the better way to plot it.¹ But such a construction would not alter the wide dispersion of costs. The ratio of the highest factory cost to the lowest is 3.04 (.73 : .24), while the ratio of the highest cane cost to the lowest is only 2.15 (3.03 : 1.41). Granting that extremes may be exceptional and afford an unsatisfactory measure of dispersion, the case is not much improved when we compute, and use as our measure, coefficients of dispersion: .135 for cane costs and .232 for factory costs, when computed on the basis of average deviations, and .177 for cane costs and .300 for factory costs, when computed from standard deviations.

That the case is not exceptional for Hawaii is shown by the fact that the results are similar for the other sources of supply, as is shown by the following table:

¹ Even in the case of production under conditions of varying cost, a curve plotted from data taken at any given instant of time would be steeper than the theory of economic rent would account for. There would be efficient and inefficient producers in such an industry also. The lowest cost would be that of the "captain of industry" operating on the best site, who would reap both economic rent and rent of ability. The highest cost would be that of a new, inefficient, or decaying concern operating at a loss on marginal land.

MEASURES OF DISPERSION IN CANE (OR BEET) COSTS AND
FACTORY COSTS IN THE SUGAR INDUSTRY

Location or character of industry	Ratio of highest cost to lowest		Coefficients of dispersion	
	Cane (or beet) cost	Factory cost	Cane (or beet) cost	Factory cost
Hawaii. . . .	2.15 (3.03 : 1.41)	3.04 (.73 : .24)	.135	.232
Cuba	2.12 (1.65 : .78)	3.28 (.72 : .22)	.132	.204
Porto Rico	1.83 (2.81 : 1.53)	2.81 (.71 : .25)	.097	.210
Beet Sugar	2.73 (4.48 : 1.64)	11.20 (4.92 : .44)	.184	.326

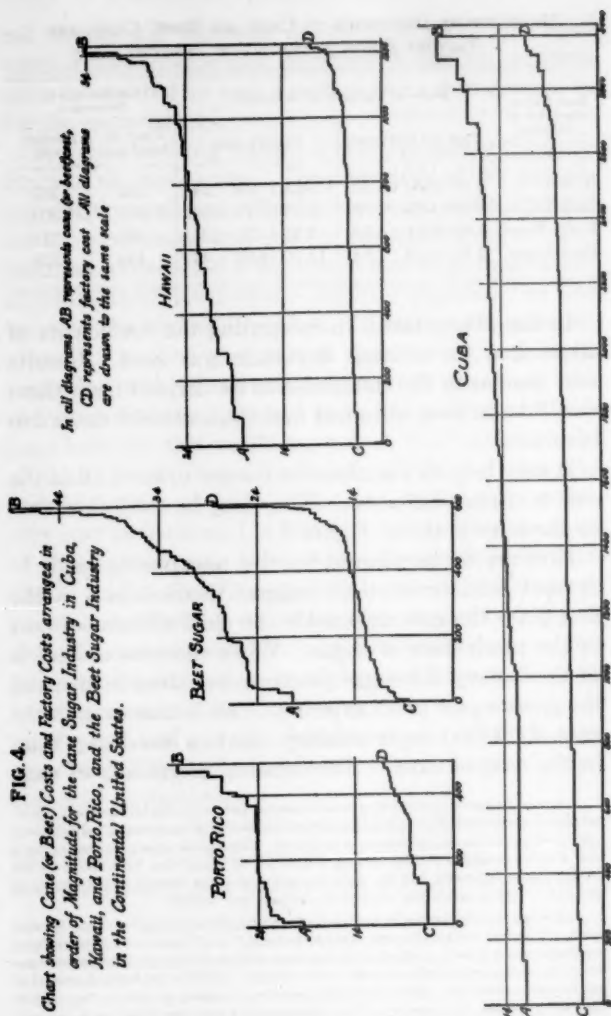
In the above table, in computing the coefficients of dispersion, the average deviation was used. Results very similar in the inferences to be derived from them would have been obtained had the standard deviation been used.

It may help to visualize the matter to have all of the curves of costs before us. They may be studied, drawn to the same scale, in Figure 4.

How are we to account for this unexpected result? ¹ Several possible solutions suggest themselves. In the first place the raw material is the chief element of cost in the production of sugar. When the cane or beet is at the factory the sugar producer has already incurred the greater part of his expense. This is true even in the case of the beet sugar industry, tho to a less degree than in the case of cane.² The relative magnitude of cane

¹ A careful inspection of the diagrams does show, however, a slightly greater horizontal tendency for the line of factory costs than for the line of agricultural costs, in each case, throughout the central portion of its course. This slightly greater concentration is shown in the comparative histograms, Figure 5. It would also have shown in the coefficients of dispersion, had we taken the pound of sugar instead of the factory as the unit. To this extent the conclusions of theory are verified.

² The cane and beet sugar industries are not altogether comparable. The "finished product" turned out by the cane sugar factories is "raw" sugar, and must undergo another distinct process, performed by the great sugar refineries of the so-called sugar trust, before it is comparable with the "refined sugar" which is the finished product of the beet sugar factories. In the beet sugar factories, therefore, the factory cost, including both processes, is a more important element of the total cost than it is in the cane sugar industry.



(or beet) costs and factory costs is indicated to the eye in the diagrams, and is shown numerically in the following table:

Location or character of industry	Average cane or beet cost Cents per pound	Average factory cost Cents per pound
Hawaii.....	.0201	.0040
Cuba.....	.0103	.0041
Porto Rico.....	.0202	.0050
Beet Sugar.....	.0281	.0113

It will be seen that the factory cost varies from about $\frac{3}{10}$ of the total cost in the case of the beet sugar industry to only $\frac{1}{4}$ in the case of the cane sugar industry in Hawaii. While therefore the dispersion of factory costs as compared with their own mean is greater than the dispersion of cane (or beet) costs the absolute effect of such dispersion upon the total cost is less. For example, in Hawaii the ratio of .73 cent to .24 cent (factory costs) is much greater than the ratio of 3.03 cents to 1.41 cents (cane costs); yet the former adds only .49 cent to the cost per pound of sugar while the latter adds 1.62 cents, and it is the absolute difference which counts in the competition between sellers of sugar. A sugar producer, therefore, can stand a relatively high cost in his factory if he is favorably situated with respect to his supply of cane or beet. The problem of paramount importance to him is to reduce his cost of raw material.

The close relation between the cane cost and the total cost is very evident to the eye from Figure 2 as already noted. This close relationship may be shown even more impressively by applying Pearson's formula for correlation. The following table will exhibit the coefficients of correlation between cane (or beet) costs and total costs, factory costs and total costs, and cane (or beet) costs and factory costs:

CORRELATIONS OF COSTS IN THE SUGAR INDUSTRY COMPUTED
BY PEARSON'S FORMULA

Location or character of industry	Coefficients of correlation		
	Cane (or beet) — Total	Factory — Total	Cane (or beet) — Factory
Hawaii.....	.935	.585	.257
Cuba.....	.815	.451	— .100
Porto Rico.....	.898	.234	— .231
Beet Sugar.....	.760	.643	.096

The very high, almost perfect, correlation between the cost of raw material and the total cost is at once apparent from the table. There is a moderate correlation also between the factory cost and the total, greatest in the case of beet where, as explained above [footnote p. 109] the factory cost is a more important element than is the case with cane. The correlation between the cane (or beet) cost and the factory cost is negligible.¹ When positive, it perhaps indicates that a concern which is efficient in operating its factory is likely also to be efficient in securing its cane or beet supply. This correlation, however, is very low, and, indeed, in Cuba and Porto Rico it is negative.

But the relative unimportance of the factory operations as compared with the agricultural operations as elements of the total cost could not, taken by itself, account for the dispersion of factory costs. If the two phases of the industry were entirely independent, if the cane or beet sold in the markets of the world at a uniform price, determined, let us suppose, by the cost of production to a representative firm at the margin of cultivation, then the force of competition, acting upon the factories, would be much more potent in eliminating

¹ The probable errors in this set of correlations are, Hawaii, .003; Cuba, .003; Porto Rico, .146; Beet, .076.

the inefficient firms and would thus tend to bring about a much closer approximation to a uniform cost of production among them. But the two phases of the industry are not independent. In the Report on the Beet Sugar Industry, we read (page 152):

Perhaps no other manufacturing industry is so sensibly dependent upon agriculture as the beet sugar industry. On the other hand, no other branch of farming of equal importance is so entirely dependent upon a strictly local industry. Other industries are dependent upon the farmer for their principal raw material, but their relations with the farmer are so distant as not to be a sensitive factor. The cotton manufacturer and the miller must depend upon the cotton and grain grower for their supplies of raw material, but millions of farmers in various parts of the world grow these commodities. These farm products are of such a character and their manufacture is of such a nature that they can be economically shipped thousand of miles. Thus the farmer and the manufacturer may be widely separated.

Sugar beets, however, cannot be economically shipped a long distance. Only about 12½ per cent of the weight of beets is extractable sugar, the extreme range being about 10 per cent to about 16 per cent, and the average is about 12½ per cent. Thus, if the freight charges on a ton of beets are 40 cents, or 2 cents per 100 pounds, the charge on the extractable sugar will average about 16 cents per 100 pounds. It is apparent, therefore, that the sugar factory and the beet grower must be near each other; otherwise, the farmer must sell his beets at a lower price than he can afford. The sugar manufacturer must obtain his beets at a price that will enable him to sell his product in competition with cane sugar or he will fail.

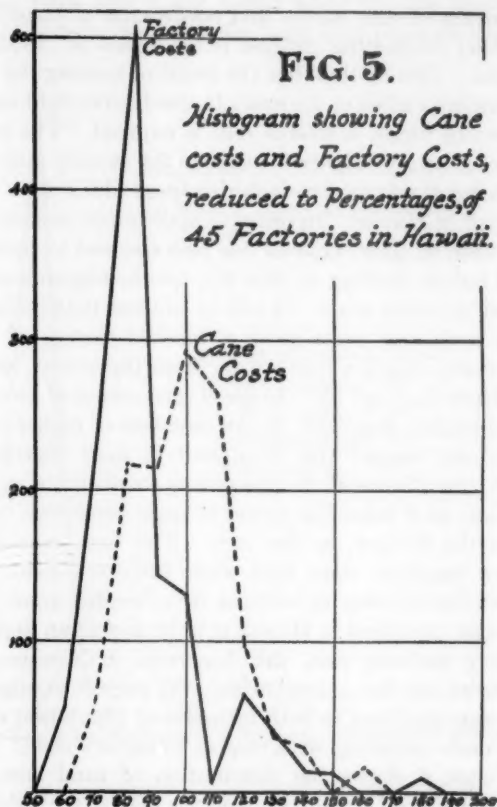
The above was written with reference to the beet sugar industry, but, with the change of a few words, it would apply almost equally well to the cane. Under such conditions of production it is apparent that competition could have little tendency to reduce factory costs to a uniform level. An inefficient factory, provided it were favorably located with respect to cane or beet supply, might continue to compete indefinitely. For its rival, however efficient, could not, because of the necessarily local character of the cane or beet supply, so extend its operations as to satisfy the de-

mand, and therefore it would not undersell and drive its inefficient competitor out of the race. It would prefer to sell at the marginal price and reap its "rent of ability." This would be the result even when, as in the beet sugar industry, the beets are grown by nominally independent¹ farmers and sold to the factory. The case is even stronger, when, as in Hawaii, the factory actually owns and operates its own plantations. Under such conditions it is obviously only the total cost that counts in determining whether a competitor can survive. A high factory cost may be offset by a low cane cost and *vice versa*.

But even this is not the whole story. The refining of sugar is an independent industry. Its raw material, "raw" sugar, is obtained at a uniform price (allowing for freight differences) in a world market. Detailed figures are not available, but such as we have indicate that here also there is a wide dispersion of costs, varying from .36 to .59 cents per pound of refined sugar produced. In the absence of more complete data we can only speculate as to the explanation of the persistence of such a dispersion. Does a partial monopoly have anything to do with it? Should a series of years, rather than a single year, be taken as a basis of investigation? Costs may in the long run be uniform for competing firms tho differing widely for a single year, "bad" years being offset by "good" years. When the demand for a product is strong and increasing, do the forces of competition even in independent, manufacturing industries tend to bring about so nearly a uniform cost as theory has supposed? New factories and a new labor force cannot be assembled in a day, especially when the initial

¹ "Nominally independent," because the farmers produce under a form of contract which makes them virtually little more than factory employees. Much the same relation exists between the factories and the "colonos" in Cuba. In Cuba, however, as in Hawaii, much of the cane is grown directly under the factory management.

outlay for fixed capital is large. Is there not always under such conditions a large volume of quasi rent?



The whole matter suggests the desirability of gathering data from many industries to test this item of economic theory: a desirability which the increasing scrutiny of

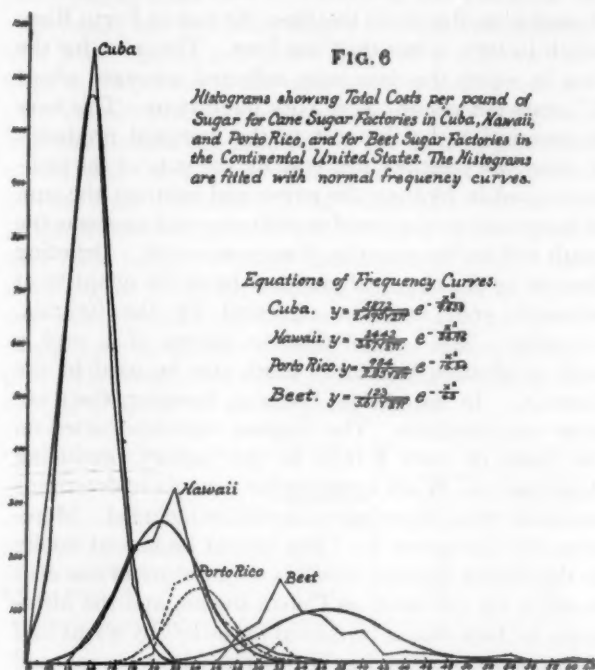
governments into the conduct of private business enterprises is likely to make more and more a possibility.

We have studied the degree of concentration of costs by means of cost curves and coefficients of dispersion. Another interesting method is by means of frequency graphs. This method has the merit of making the concentration visible to the eye. It also throws light on the extent to which economic rent is enjoyed. The histograms shown in Figure 5 compare the factory and cane costs for the forty-five factories from which data were secured in Hawaii. In order to make a fair comparison the data of costs were in this case reduced to percentages before plotting so that the two histograms might be on the same scale. It will be noticed that both factory and cane costs show a marked degree of concentration about a cost not far from the lowest, with a tendency to "tail off" to small increments of product, considerably dispersed, in the direction of higher costs.

In one respect this treatment is more instructive than that followed in computing coefficients of dispersion, as it takes the pound of sugar produced, rather than the factory, as the unit. The two treatments, taken together, show that while there is considerable dispersion in costs, as between factories, the great mass of sugar produced in Hawaii is produced at an approximately uniform cost, the dispersion with respect to factories and the concentration with respect to quantity of sugar applying to both factory and plantation costs, but more markedly with respect to factory costs.

Figure 6 shows the distribution of total costs for Hawaii, Cuba, Porto Rico, and the beet sugar industry. In each case the histogram has been fitted with a normal probability curve. The shape and close fit (except in the case of beet) show that the distribution of costs, at each source of supply, follows approximately the law of

mathematical chance, suggesting that the greater part of the product is derived from land of approximately uniform excellence, the quantity obtained from land better than this being about offset by the quantity obtained from land inferior, and that business skill, a



mental characteristic, follows much the same mathematical law as height and weight, physical characteristics.

The poor fit in the case of beet may possibly be accounted for by the wide dispersion of the industry through states of very different soil and climate — Cali-

fornia, Colorado, Utah, Michigan, Ohio, and some other states.

The method is also interesting in illustrating the quantity of economic rent. The great mass of the sugar from Cuba is produced at a less cost than that of even the most efficient producers in Hawaii. The cost in Hawaii is on the whole less than the cost in Porto Rico, which in turn is less than the beet. The price for the year in which the data were collected averaged about 3.7 cents per pound, New York quotations. This may be assumed to be the cost to the marginal producer. If, then, we multiply this cost by the sum of the ordinates used in plotting the curve and subtract the sum of the products of successive ordinates and abscissas the result will be the quantity of economic rent. Denoting the cost to the marginal producer by m the quantity of economic rent may be expressed by the formula, $r = m\sum y - \sum xy$. (The discrete values of x and y used in plotting the curve must also be used in the formula.) In the present instance, however, there are some complications. The diagram was constructed on the basis of costs F.O.B. at the factory, excluding depreciation. When applying the formula to determine economic rent depreciation should be included. Moreover, the histogram for Cuba should be moved bodily to the right a distance which is the measure of one cent to allow for the tariff on Cuban sugars, and the histogram for beet should be moved to the left by about half that amount to allow for the difference between raw and refined sugar. (See footnote, p. 109.) Some additional shifting to the left and right to allow for freight differentials would also be necessary if the result is to approximate accuracy. Such shiftings would considerably lessen the range of rent-yielding costs. If the tariff were removed it is probable that producers now occupy-

ing marginal land would be squeezed out and the marginal cost lowered by nearly ¹ the amount of the Cuban tariff. This would be shown by the disappearance of the right-hand portions of the beet, Porto Rican, and Hawaiian histograms, thus again lessening the range of rent-yielding costs.

In regard to costs under large and small scale production, a mere glance at Figure 2 shows that in Hawaii the large scale producers are also the low cost producers with respect both to plantation and factory costs, and in Hawaii where the plantations are to a large extent owned and operated by the factories this conclusion derived from inspection of the diagram is warranted. If the forty-five factories are arranged in accordance with their output of sugar and are then divided into three groups of fifteen factories each, it will be found that both the cane cost and the factory cost per pound of sugar produced vary inversely as the scale of production. The larger the scale of production, the smaller the cost, as is shown by the following table:

	Of total output, produce	At, cents per pound, cane cost	At, cents per pound, factory cost
Fifteen largest factories.....	2/3	1.81	.31
Fifteen medium "	1/4	2.07	.38
Fifteen smallest "	1/12	2.15	.50

We are led to the conclusion that in Hawaii, at least, the economies of large-scale production apply to the plantation as well as the factory.

A table constructed from the data of the beet sugar industry would lead to a similar inference, but in this

¹ "Nearly," because it is doubtful whether the full demand could be met at the present Cuban margin plus Cuban marketing costs.

case the same conclusion would not be warranted. A large factory will consume a large quantity of beets and the beet cost may be low, but since the beets are usually purchased from a number of independent farmers working under contract, no inference can be drawn as to the scale of production. Our data do warrant us in concluding that the economies of large-scale production apply to the factory processes but not to the agricultural processes. Indeed, so far as we have data at all from the few factories that have attempted to grow their own beets the reverse appears to be the case. The cost of beets to such factories is higher than the cost when purchased from farmers.

To sum up: 1. The sugar industry illustrates admirably the theories of varying costs and economic rent. Competing concerns continue to produce for a common market at widely varying costs of production even as regards factory costs. 2. For the purposes of the rent theory the industry must be taken as a whole and classed as extractive through all its stages to the production of raw sugar in the case of the cane, and refined sugar in the case of the beet. 3. As regards the respective economies of large and small scale production, however, it is possible to discriminate between the factory and agricultural processes. The former shows unmistakably the economies of large-scale production in every region from which data were obtained, and in both branches of the industry. On the agricultural side, however, the beet sugar industry appears to verify the usual economic teachings in regard to the economics of small-scale production in extractive industries; while the cane sugar industry, in Hawaii at least, appear to offer opportunities for the highly capitalized methods of large-scale production on the plantation as well as in the factory.

Finally, it is hoped that this analysis may prove suggestive of methods that may be applied to data derived from other industries, and thus be of assistance in contributing to the much needed work of testing and verifying the conclusions of economic theory.

PHILIP G. WRIGHT.

THE ADJUSTMENT OF LABOR DISPUTES INCIDENT TO PRODUCTION FOR WAR IN THE UNITED STATES¹

SUMMARY

I. Labor problems in contracts for cantonments, 121. — Arrangement for adjustment, June 1917, 123. — II. The same problems in emergency shipbuilding in private yards, 126. — A similar adjustment, 127. — III. Adjustment with Longshoremen, 128. — IV. Other cases; Conclusion, 130. — Appendix: text of documents on labor adjustment, 132.

At the beginning of the participation by the United States in the war, the only governmental agency for dealing with the labor disputes which might arise incident to war-time production was the United States Department of Labor. In the past few months there has developed under government auspices additional machinery for labor adjustment in specific fields of activity bearing upon the conduct of the war. It is these which will be considered in the present paper.

I

The work of building cantonments for the National Army was the first field of the government's war work in which it seriously encountered the labor problem. The problem here was quite distinct from those incident to the government's contracts for munitions and supplies. Any system of adjustment adopted by the government for the quick adjustment of wage disputes for the sake of insuring continuous production of munitions and supplies, will encounter scores of different crafts and grades of labor. It will further face the difficult

¹ This paper has been prepared by Mr. Wehle at the request of the Editor.

situations which arise because the government's adjustments of wages will necessarily affect costs in private plants largely concerned with regular competitive production under private contracts or for the open market. The cantonments, on the other hand, were to be built in the field, in a short period of time, by an employer whose plant was to be devoted to one order and then moved away, and whose force was to be recruited from not over ten building trades crafts. Cantonment construction therefore presented a peculiarly fortunate opportunity for an experiment in labor adjustment, which would perhaps serve as a guide in the more complex conditions obtaining in other fields of war-time production.

The two outstanding serious labor considerations facing cantonment construction were, first, that the building trades are strongly organized; and, second, that on account of the gigantic volume of work to be done in a few weeks' time, the government could not allow any contractor to be limited to union labor in his employment of workers. The expedient method for dealing with the labor problem in cantonment construction seemed to be that in the event of labor disputes the contractor should yield to the government's control of wages, hours, and conditions and then that the government's control should be guided by an authority such as would insure submission of disputes during continuous production, equitable decisions, and peaceful compliance with the decisions. This course was rendered the more feasible because the contracts for cantonment construction were not upon a fixed-price basis, but were "cost-plus-percentage" contracts, in which the contractor was to be reimbursed for his wage cost whatever it might be. Accordingly the following provision was inserted in the form of the War Department's contract for the building of cantonments:

In the event of any dispute with reference to wages, hours, or other conditions appertaining to said work, between the contractor or any subcontractor and labor employed by him on said work, the contractor or subcontractor shall immediately notify the contracting officer (Construction Quartermaster) of the existence of such dispute and the reasons therefor. The contracting officer may, at his option, instruct the contractor or subcontractor involved in such dispute as to the method or steps which the contractor or subcontractor should follow with reference thereto, and the contractor or subcontractor shall thereupon comply with such instructions.

For some weeks prior to the issuance by the War Department of the contract form for cantonment construction a number of contractors had been at work building cantonments for the accommodation of the increments to the regular army, simply under a written memorandum of a few lines between them and the Quartermaster-General. In this way it happened that, even before the contracts were signed, labor troubles had arisen which impliedly carried threats of interruption to the Department's entire emergency building program. Tho some of the complaints were on wages and hours, the serious friction was in connection with open-shop conditions maintained by contractors. A factor which rendered the matter peculiarly difficult was that, altho some of the leaders of union labor recognized that open-shop conditions were essential, any formal writing for the signature of a union official expressly declaring such an attitude seemed out of the question. This largely accounts for the form of the negotiations which will presently be examined.

On June 19, at a time when several disputes over wages and labor conditions were pending, a concise memorandum was entered into between the Secretary of War and the President of the American Federation of Labor, in their private capacities as individuals.

It provided for a commission of three persons to be appointed by the Secretary of War. Two of these were

to represent the army and the public, respectively; the third was to represent labor, and was to be nominated by Mr. Gompers. It provided further, that as "basic standards" the commission should use the "union scales of wages, hours, and conditions in force on June 1, 1917," in the respective localities. Adjustments made by this commission were to be "treated as binding." The phrase, "union conditions" was thought to need specific interpretation on at least one point, namely, the employment of non-union labor. On this subject, some further exchange of letters and telegrams took place, which made it clear that insistence upon the union shop was not contemplated by the labor representatives. A further memorandum of the same date specified the procedure to be followed in case of dispute. The text of the several documents is given below; they constitute the "basic papers" of the arrangement.¹

The cantonment adjustment commission was organized a few days later. It met intermittently throughout the first three months of its existence, sometimes after intervals of from two to three weeks. Up to October 1, 1917, it had held twelve meetings and had formally considered thirty-three disputes. The continuous activity under the arrangement consisted, not in sittings of the commission, but in direct correspondence and conferences by members of the commission and by its counsel with union representatives and with officers in the Quartermaster Corps under whom cantonment construction was being carried on. It was through this informal process that on several occasions the open-shop issue, sharply raised by local unions, was disposed of, through the efforts of Mr. Gompers or of international officials, and that many other grievances were

¹ See p. 132.

handled satisfactorily to all concerned. The work of some of the local examiners, in investigation and in mediation was very helpful.

On July 27, a supplementary memorandum was entered into, by which the arrangement was made applicable, if so ordered by the Secretary of War, to any other construction work which might be carried on during the war by the War Department. In pursuance of the supplementary memorandum, the Secretary of War extended the jurisdiction of the adjustment commission to construction work on aviation fields, and on September 4 to the construction of warehouse and storage facilities.

On August 10, when a serious labor dispute was pending at a naval cantonment under construction at Pelham Bay, N. Y., it was agreed between the Secretary of the Navy and Mr. Gompers that the arrangement for labor adjustment for army cantonments be applied to naval shore construction, the members representing the public and labor respectively, and counsel for the Commission, to retain their places, and the Army representative to be replaced by one from the Navy. Thus far the Navy's shore work has been of relatively small volume compared with that of the Army and has been pursued under less pressure. Up to October 1, it had brought no labor differences to the commission for adjustment under the arrangement just mentioned.

To sum up: the labor adjustment machinery for emergency building construction may be said to have operated with success up to date. Roughly speaking, it was a bargain for union scales in exchange for the open shop. The promise to accept the decisions of the commission as final, i. e., not to strike, was part of the *quid pro quo* from labor. But such a promise is a necessary

logical corollary of any adjustment agreement, and further, was in this case largely a voluntary expression of the patriotism among union leaders and men which is playing a large part in the psychology of labor problems.

II

The labor-adjustment plan for the government's emergency shipbuilding program in private shipyards was formulated hastily, under pressure of urgent necessity in the third and fourth weeks of August after serious conflicts had already developed. Some of its obvious defects may be ascribed to the compromises necessitated by such a situation.

In private shipyards on the Atlantic, Pacific, and Gulf coasts, and on the Great Lakes, in the middle of August, there were being projected or constructed under contract with the Emergency Fleet Corporation¹ over one and a half millions of tonnage in steel and wooden ships. There were under construction or about to be under construction over a million and a half in tonnage commandeered or requisitioned by the Fleet Corporation and there were also in course of repair German and Austrian ships, taken over by the President, aggregating over 700,000 in tonnage. The German ships were seized by the government and the Austrian ships were requisitioned on the basis of compensation to be determined and paid. In a number of private yards the Navy Department also had vessels under construction. At this time, strikes on the Atlantic seaboard on the work of repairing German and Austrian ships had been in progress for several weeks; cessation of work had occurred at yards on the Delaware

¹ The full title of the government board is "United States Shipping Board Emergency Fleet Corporation."

River; and serious difficulties were threatening ship production on the Pacific Coast. In the shipbuilding-adjustment plan there were four considerable departures from the principles of the cantonment plan. First, the memorandum was entered into by representatives of the Navy and the Fleet Corporation not only with Mr. Gompers as the spokesman of organized labor, but also with the International presidents, as such, of unions involved in shipbuilding. Second, the contractor, through his voice in the selection of the district mediator, and through his representation as an associate member of the adjustment board with voting power, became an important part of the adjustment machinery. Third, the scales of wages and hours in force in each plant on July 15, 1917, and not union scales, were made basic standards; and fourth, the arrangement was silent as to the union shop, simply defining as basic for each yard the status which existed on July 15, 1917.

In other respects, the arrangement was similar to that for the cantonments. An adjustment board of three was provided for, all appointed by the Fleet Corporation. One of these was to represent the corporation itself; another was to represent the public, and was to be nominated by the President of the United States; and the third was to represent labor, and to be nominated by Mr. Gompers. An alternative representation was provided, however, as regards the labor member. Two persons were to be nominated by Mr. Gompers — one from the metal trades, and one from the trades concerned with the construction of wooden hulls. According as the matter under consideration referred to the one or the other of these kinds of construction, the appropriate nominee was to act as member of the board. The arrangement provided further

for an examiner in each of a set of geographical districts, this examiner to be selected by the employers and by the representatives of labor organizations jointly. The duty of the examiner was to bring about adjustment of disputes, or in any case, to recommend terms of adjustment. The final decision was to rest with the adjustment board.¹

The "Shipbuilding Labor Adjustment Board," created under the arrangement just noted, was at the outset delayed in taking up its work, largely through differences which arose between the Fleet Corporation and certain of the shipyard owners as to how additional costs of constructing commandeered ships, due to wage increases, were to be borne. At the present writing the board's work has not acquired a fixed character, and its effectiveness is also somewhat impaired by reason of the absence of the signatures to the arrangement of certain union officials whose organizations are concerned with shipbuilding. It was handicapped by the strikes which occurred in Pacific-coast yards in the first three weeks of September, while the board's activities were being delayed, and which rendered its task many degrees more serious than was expected at the time of its creation. It would be difficult at this time to hazard a conjecture as to the Board's success, or even as to its effectiveness.

III

Late in the summer of 1917 strikes at the docks of New York and New Orleans had made it apparent that some basis for adjustment was necessary in order that freight movements overseas should not be subject to chronic interruption. The longshoremen on all coasts of the United States number over 150,000; of these

¹ For the text of the memorandum, see p. 136.

about 60,000 are members of the International Longshoremen's Association, which is affiliated with the American Federation of Labor. In the last days of August, a memorandum was signed by the Secretary of Labor, the Secretary of War, the Vice Chairman of the United States Shipping Board, the President of the American Federation of Labor, the President of the International Longshoremen's Association, and six representatives of steamship interests.

The longshoremen's agreement provided for a National Adjustment Commission of four persons nominated respectively by the United States Shipping Board, the Secretary of War, the International Longshoremen's Association, and the Committee on Shipping of the Council of National Defense, to represent the carriers. For the carriers, as for the workmen under the ship-building arrangement, an alternative representation was provided. Two persons were nominated (both by the Committee on Shipping of the Council of National Defense) to represent the carriers; one to act in cases involving the coastwise carriers, and the other in cases involving foreign service. In addition to the National Commission thus constituted, local adjustment commissions were provided for, made up in each case of three members, all appointed by the National Commission. One member was to represent the Fleet Corporation, the second the International Longshoremen's Association, and the third the carriers. In this case again provision was made for two representatives of the carriers, to act respectively in matters involving coastwise and foreign trade. As regards union conditions, the stipulation was the same as in the cantonment memorandum: the union scale of wages, hours, and conditions was to be adopted as the "basic standard," and the adjustments were to be "binding on all parties."

A new feature of this arrangement is the local adjustment commission at each port. In any general plan for handling labor disputes incident to munitions and supplies production, this feature should prove useful. The New Orleans longshoremen's dispute is at the time of the writing of this paper being handled by the local commission, and up to the present time with apparent success. It is still too early to predict the efficacy of this undertaking, especially in view of the fact that the Longshoremen's Association is at many points made up of local elements which do not readily follow the national officers.

IV

Conditions surrounding manufacture have received special attention in the War Department in connection with the making of clothing for the Army. Upon reports that some of this work was being done in tenement houses, under unsanitary conditions, an order was issued by the Quartermaster-General in April 1917, directed against home work. Investigation of complaints which were later brought to the attention of the department, led in August to the appointment by the Secretary of War of a committee of three, which was to recommend manufacturers for contracts based upon the soundness of their labor standards, to handle disputes, and to report upon conditions in the industry concerned. Largely perhaps because this field of production is occupied by rival labor organizations, this arrangement was not based upon a memorandum analogous to those just examined, and there is on the committee no direct representative from the workers. Three situations have thus far received the attention of the committee, but without such results, as would

warrant a prediction on the ultimate outcome of the arrangement.

It will be noted that there has been no direct attempt in connection with the various arrangements cited above, to effect a relaxation of such union regulations as restrict output or limit performance. In Great Britain, within eight months after the war had begun, the trade unions, in the "Treasury Agreement" voluntarily surrendered such regulations; and this vastly important contribution by union labor to British national effectiveness was followed a few weeks later by its endorsement of the Munitions Act, which made imperative what had been so conceded. The question has not yet received any serious attention in the United States. Fortunately one of the reasons is that in this country production has suffered far less than in Great Britain from such union regulations, and still less from the abuse of bad timekeeping which was so rife in England. Nevertheless, in some fields of manufacture the union restrictions seriously contract the volume of product, and will doubtless compel attention in some branches of war work before many months have passed.

Such is the labor-adjustment machinery which has come into existence under governmental influence during the first five months of the war. It is obvious that its scope as yet is limited. No system of general adjustment or governmental control has yet been put into operation for dealing with strikes which may arise, indeed have arisen, in mines, lumber camps, machine shops and factories, where munitions and supplies are being produced for the conduct of the war. If the above described method of labor adjustment, which is still in its experimental stage in shipbuilding and in the work of the longshoremen, should prove effective, undertakings to extend it to munitions and supplies

production may perhaps be expected. In trying out that method, one crucial question, among others will arise: will the international presidents or other general officers of the unions prove strong enough to induce their locals to lay aside the weapon of the strike and to accept as final the decisions of the adjustment board? Important and difficult issues are involved, and it remains to be seen what will be the outcome.

LOUIS B. WEHLE.

WASHINGTON, D. C.
October 3, 1917.

APPENDIX

DOCUMENTS ON LABOR ADJUSTMENTS FOR THE WAR

I. CONSTRUCTION AT CANTONMENTS AND ELSEWHERE

1. MEMORANDUM

June 19, 1917.

For the adjustment and control of wages, hours, and conditions of labor in the construction of cantonments, there shall be created an adjustment commission of three persons, appointed by the Secretary of War; one to represent the Army, one the public, and one labor; the last to be nominated by Samuel Gompers, member of the Advisory Commission of the Council of National Defense, and President of the American Federation of Labor.

As basic standards with reference to each cantonment, such commission shall use the union scales of wages, hours, and conditions in force on June 1, 1917, in the locality where such cantonment is situated. Consideration shall be given to special circumstances, if any, arising after said date which may require particular advances in wages or changes in other standards. Adjustments of wages, hours, or conditions made by such board are to be treated as binding by all parties.

(Signed) NEWTON D. BAKER.
(Signed) SAMUEL GOMPERS.

2. EXPLANATORY LETTERS AND TELEGRAMS

WASHINGTON, June 20, 1917.

MR. FRANK MORRISON,
Secretary American Federation of Labor,
Washington, D. C.

re Cantonment Construction Labor Conditions

MY DEAR MR. MORRISON:

Confirming our talk over the telephone this afternoon, it must be clearly understood, as a basis for any labor adjustment machinery, that the government cannot commit itself in any way to the closed shop, and that the conditions in force on June 1, 1917, which are to serve as part of the basic standards do not include any provisions which have reference to the employment of non-union labor. In our telephone talk just now, I understand that you accede to this view. The word "conditions" is of course clearly understood to refer only to the union arrangements in the event of overtime, holiday work, and matters of that kind. This was clearly understood between Mr. Gompers and myself this morning when we agreed that it would not be legally possible at this time to insert in an understanding—even so much as a provision that preference be given to members of organized labor.

Very truly yours,

LOUIS B. WEHLE.

Copy to Mr. Gompers.

TELEGRAM

NEW YORK, June 22, P.M., 4.48.

LOUIS B. WEHLE,
901 Munsey Building, Washington, D. C.

Your understanding of the memorandum signed by Secretary Baker and me is right. It had reference to union hours and wages. The question of union shop was not included.

SAMUEL GOMPERS.

WASHINGTON, June 23, 1917.

SAMUEL GOMPERS, Esq.,
President American Federation of Labor,
Washington, D. C.

re Cantonment Construction Labor Conditions

MY DEAR MR. GOMPERS:

I acknowledge receipt from you yesterday evening of the following telegram:

"Your understanding of the memorandum signed by Secretary Baker and me is right. It had reference to union hours and wages the question of union shop was not included.

SAMUEL GOMPERS."

This completes the record sufficiently for me to be able to deliver the memorandum over to Secretary Baker. So long as there was a possibility that any one could misunderstand the intention of the memorandum in connection with the question of the union shop, I deemed it best to keep the memorandum undelivered. Of course, the government could not possibly, under the present state of the law, commit itself in the employment of labor to employing only union labor or even to giving preference to union labor.

The consummation of this informal memorandum will, I hope, result beneficially to all parties and be a help to the government in this emergency.

Very truly yours,

(Signed) LOUIS B. WEHLE.

3. PLAN OF PROCEDURE

*Under the Memorandum of June 19, 1917, signed by
Newton D. Baker and Samuel Gompers*

1. The Cantonment Adjustment Commission will sit at Washington, D. C., unless specially ordered by the Secretary of War to go to the site of a construction.

2. It will obtain full information of union scales of wages, hours, and conditions in force on June 1, 1917, in the several localities where cantonments are to be constructed, for such labor as is being or will be employed on such work. For this information the Commission will rely upon data furnished so far as may be practicable by the Department of Labor.

3. The cantonments will be conveniently districted and the Secretary of War, will for the period of the construction and with the unanimous approval of the Commission, appoint for each district a responsible impartial examiner who shall act under the orders of the Commission.

4. If a dispute arises which cannot be adjusted satisfactorily by the contracting officer (construction quartermaster) at the site to the employers and the employees involved, the contracting officer shall issue a provisional order which may be affirmed, reversed or modified by the Adjustment Commission.

5. In cases where the provisional order of the contracting officer is not accepted, the actual work of construction shall not be interrupted, but the contracting officer shall notify the member of the Commission representing the Army of the matter in dispute, the proposals made by each party for adjustment, and of the provisional order which he has issued. At the same time the member of the Commission, designated by Mr. Gompers, shall obtain from a reliable source a report on the matter in dispute.

6. If the Commission is so notified that a dispute is not adjusted satisfactorily at the site, or if it learns from other sources that a dispute is in such condition, it will as speedily as possible send an examiner to the site.

7. The examiner shall have authority, acting under the orders of the Commission to mediate between the parties. If he fails in this he shall report promptly and fully to the Commission with a recommendation. The examiner shall, if ordered by the Commission or by any one of its members, remain at the site to supply any further information that may be asked for.

8. The rulings of the Commission are binding upon all parties concerned.

9. Notice of a ruling shall be sent to the contracting officer and to the spokesmen of the parties involved in the dispute.

10. The examiner will supervise the application of the Commission's rulings with reference to hours, wages, and conditions and with reference to any accounting which may be proper under such ruling. Any change in wages, hours, or their application, when finally agreed to, or when finally fixed by the Commission, shall for accounting purposes be effective so far as practicable as of the date which may be fixed by the agreement, or by the ruling of the Commission.

11. The Commission shall have power to make additional regulations in order to achieve the purpose of the memorandum, and shall decide all questions arising under it.

4. SUPPLEMENTARY MEMORANDUM

WASHINGTON, D. C., July 27, 1917.

The arrangement for the adjustment of wages, hours, and conditions of labor, entered into between the signers of this memorandum on June 19, 1917, with reference to cantonment construction, may, on order of the Secretary of War, be extended to embrace any other construction work which is now being, or may from time to time during the war be, carried on by the War Department,

NEWTON D. BAKER,
Secretary of War.

SAMUEL GOMPERS,
President American Federation of Labor.

II. SHIPBUILDING

MEMORANDUM FOR THE ADJUSTMENT OF WAGES, HOURS, AND
CONDITIONS OF LABOR IN SHIPBUILDING PLANTS

When disputes arise concerning wages, hours, or conditions of labor, in the construction or repair of shipbuilding plants or of ships in shipyards under the United States Shipping Board Emergency Fleet Corporation, or under said Shipping Board, or under contract with said Corporation or with said Board, adjustment of such disputes shall be subjected to an adjustment board of three persons, hereinafter called "the Board" to be appointed by the United States Shipping Board Emergency Fleet Corporation, one to represent the said Corporation, one to represent the public and to be nominated by the President of the United States, and one to represent labor, the last to be nominated by Samuel Gompers. Two persons shall be so nominated by Samuel Gompers — one from the metal trades to sit when the matter under consideration concerns construction of shipyards or steel ships, and one from among the trades primarily concerned to sit when the matter under consideration has reference to wooden hulls. Where such matter concerns wages, hours, or conditions applying to the production of both kinds of ships, only one of the two said nominees representing labor shall sit on said board, the question as to which of such nominees is to sit to be determined between them, or in the event of their disagreement to be determined by Samuel Gompers. When matters concerning any plant or plants are before the Board, it shall invite a person representing, and designated by, the owner or owners of such plant or plants, and also a person representing, or selected by, the majority of the workers in the particular craft or crafts directly interested in the disputed matters, both of said representatives to sit with voting power as associate members of said Board in connection with such matters.

If a question coming under the jurisdiction of the Board arises with reference to such construction in a private plant in which construction is also being carried on for the Navy Department, the Secretary of the Navy or such person as he may designate shall sit with voting power as a member of the board. In the event of a tie vote, when the board is so constituted, the decision shall be referred to the Chairman of the Council of National Defense or to such person as he may designate. This memorandum shall in no way serve as a precedent for procedure in government plants under the War or Navy Departments.

The plants where such construction is being carried on shall be geographically districted by the board. In each district, the contractors in whose plants such construction is being carried on, and the representatives of such international labor organizations as have

members engaged in such production or construction in such plants, and as are selected for the purpose by the labor member of the board, shall be called upon, under conditions to be laid down by it, to agree upon a person or persons who shall act under the direction of the board as Examiner or Examiners in such District. If the board does not succeed in having an Examiner so selected, then the board shall by unanimous action select a person or persons for such position. The Examiner shall be subject to removal by the board at any time by unanimous vote. It shall be the duty of the District Officer of the United States Shipping Board Emergency Fleet Corporation to report promptly to the board any dispute with reference to wages, hours, or conditions of labor which he is unable to adjust satisfactorily to the principals concerned; but the board will take cognizance of such dispute when information concerning it comes from any source whatsoever. Before the District Officer shall refer such dispute to the board, he shall confer with the local spokesmen or representatives of such crafts as are involved in such dispute, or with such authorized heads of any local labor organizations interested therein as may be designated by the labor member of the board, or on their request with the national head or heads of such organization or organizations or his or their duly authorized representative or representatives. When it appears to the board that such dispute cannot be so adjusted, it will promptly send an Examiner for said district to such plant to bring about mutually satisfactory adjustment, the terms of which shall, if they receive the approval of the Examiner, be in a report submitted by him to the board for its ratification. If the Examiner does not succeed in bringing about such adjustment, he shall in his report to the board, recommend terms of adjustment. The board, after due consideration and such investigation as may seem necessary, shall decide the questions at issue.

As basic standards with reference to each plant where such construction is being carried on, the board shall use such scales of wages and hours as were in force in such plant on July 15, 1917, and such conditions as obtained on said date in such plant. Consideration shall be given by the board to any circumstances whatever arising after such wages, hours or conditions were established, and which may seem to call for changes in wages, hours or conditions. The board shall keep itself fully informed as to the relation between living costs in the several districts, and their comparison between progressive periods of time. The decisions of the board shall, under proper conditions, be retroactive, in which case accounting such as may be proper shall be made in accordance with the directions of the board. The decisions of the board will, insofar as this memorandum may be capable of achieving such result, be final and binding on all parties; but at any time after six months have elapsed following such ratified agreement or any such final decision by the board on

any question as to wages, hours, or conditions in any plant, such question may be reopened for adjustment upon the request of the majority of the craft or crafts at such plant affected by such agreement or decision.

The above final draft, being the same with minor changes as that agreed to by the Secretary of the Navy on August 16th, is hereby approved.

F. D. ROOSEVELT,
Acting Secretary of the Navy.

AUGUST 20, 1917.

Edward N. Hurley, Chairman U. S. Shipping Board.
W. L. Capps, General Manager Emergency Fleet Corporation.
Jas. O'Connell, President Metal Trades Department, A. F. of L.
Wm. H. Johnston, President International Association of Machinists.

A. J. Berres, Secretary-Treasurer Metal Trades Department, A. F. of L.

Approved as approved by the above August 20, 1917. Samuel Gompers.

Joseph F. Valentine, President International Molders Union, per S. G.

Representing the United Brotherhood of Carpenters and Joiners of America: Theobald M. Guerin, General Executive Board, 1st Dist.

John Donlin, President Building Trades Department, A. F. of L.
Frank J. McNulty, President International Brotherhood of Electrical Workers, per S. G.

John R. Alpine, President United Association of Plumbers, Gas, Steam and Hot-waters fitters, etc., per S. G.

Milton Snellings, President International Union of Steam and Operating Engineers, per S. G.

Jos. A. Franklin, President International Brotherhood of Boiler Makers, Iron Ship Builders, and Helpers of America, per A. J. B.

Jas. Wilson, President Pattern Makers League of North America, per S. G.

J. W. Kline, President International Brotherhood of Blacksmiths of America, per S. G.

Submitted as signed: August 25, 1917

LOUIS B. WEHLE.

Wm. W. Britton, President Metal Polishers, Buffers, etc., International Union of North America, per S. G. (August 27, 1917.)

John J. Hynes, President Amalgamated Sheet Metal Workers International Alliance. (August 28, 1917.)

III. LONGSHOREMEN

AGREEMENT FOR THE ADJUSTMENT AND CONTROL OF WAGES,
HOURS, AND CONDITIONS OF LABOR IN THE LOADING AND
UNLOADING OF VESSELS ON THE ATLANTIC, GULF,
AND PACIFIC COASTS

For the adjustment and control of wages, hours, and conditions of labor in the loading and unloading of vessels, there shall be created a National Adjustment Commission, located in Washington, D. C., comprised as follows: one member nominated by the Shipping Board; one nominated by the Secretary of War; one nominated by the International Longshoremen's Association; one nominated by the Committee on Shipping of the Council of National Defense, to represent the coastwise carriers and to act only in cases involving coastwise service; one nominated by the Committee on Shipping of the Council of National Defense, to represent carriers engaged in foreign trade, and to act only in cases involving foreign service.

The National Adjustment Commission shall appoint in each important port a local adjustment commission, comprised as follows: one member to represent the Shipping Board and War Department; one to represent the International Longshoremen's Association, nominated by the International Longshoremen's Association; one to represent the carriers in foreign trade, nominated by the Committee on Shipping of the Council of National Defense, and to act only in cases involving foreign service; one nominated by the Committee on Shipping of the Council of National Defense, to represent carriers engaged in coastwise trade, and to act only in cases involving coastwise trade.

The Union scale of wages, hours and conditions in force August 1, 1917, in said port shall be adopted as the basic standard with reference to each such port.

All differences which may arise in any particular port shall be adjusted by the local commission, if possible. In case either party is dissatisfied with the decision of the local commission, it may appeal to the National Commission for a review.

In case of expiration of any agreement as to scale of wages, hours, and conditions now in force, the National Commission shall adjust the new scale of wages, hours, and conditions, provided an agreement cannot be reached by the employers and the union.

Consideration shall be given to special circumstances, if any, arising after said date of August 1, or after the acceptance of a new scale of wages, hours, and conditions, which may require particular advances in wages or changes in other standards.

In all cases work shall continue uninterruptedly pending the action of any local commission or the decision of the National Adjustment Commission.

All adjustments of wages, hours, and conditions made by the National Commission shall be binding on all parties.

The commission shall adopt rules of procedure and shall construe the meaning of this agreement and any ruling made by it thereunder.

R. B. STEVENS,¹
WILLIAM B. WILSON,²
NEWTON D. BAKER,³
SAMUEL GOMPERS,⁴
WALTER LIPPMAN,⁵
P. A. S. FRANKLIN,⁶
H. H. RAYMOND,⁶
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THE REVENUE SYSTEM OF KENTUCKY: A STUDY IN STATE FINANCE

SUMMARY

I. The general property tax under the existing system, 142. — Franchise taxes, 146. — Taxes on banks and domestic life insurance companies, 147. — Tax on distilled spirits, 148. — Other taxes, 149. — Detailed examination of franchise and bank taxes, 151. — Methods of allocating franchise values of interstate corporations, 157. — County finances (Jefferson County), 159. — School district finances, 165. — City finances (Louisville), 168. — II. Recommendations of tax commissions of 1908-09, 1912-14, and 1916, 175. — Tax laws of 1917, 178. — Estimated yield of new taxes, 182. — Effect of changes upon municipal revenues, 184. — A general corporation tax proposed, 187. — Estimated revenue from this source, 190. — Effect upon municipalities of proposed changes, 195. — III. Conclusion, 201.

THIS study of the revenue system of Kentucky is not intended to be comprehensive. It aims merely to stress certain features of the existing system that, in the opinion of the writer, require more extensive elucidation; to appraise the equitableness and the adequacy as revenue producers of recently passed tax laws; and, finally, to suggest further practicable changes or reforms. Emphasis has been placed throughout upon the fact that no study of state taxation can proceed far without some knowledge of the revenue systems and the governmental inter-relationships of the municipal taxing units. Hence an attempt has been made to test important changes, achieved or proposed, by considering their probable effect upon such local governmental units as Jefferson County, and the city of Louisville in Jefferson County. This procedure is peculiarly necessary in Kentucky in view of the percentually large part of the state income obtained from direct taxation and

then redistributed to the localities. Notwithstanding this fact, no intensive study of municipal revenue systems has yet been made, altho some valuable material concerning the counties (collected by the Special Tax Commission of 1912-14 through questionnaires sent to county officials) has been compiled and presented in an appendix to the Commission's report.¹

I. THE EXISTING TAX SYSTEM

The General Property Tax

The details of the existing tax system need not be elaborated as they have been frequently expounded during the past few years of active reform propaganda, notably in the Report of the Tax Commission of 1912-14. The largest single source of state revenue is the general property tax, whose defects have long since become commonplaces of tax doctrine. Altho the nominal state rate of 55 cents per \$100 is high, the actual rate probably is approximately half this amount, as it is estimated that, on the average, property is only assessed at slightly over 50 per cent of its market value.² The work of assessment, which is made the basis for both state and county levies, is performed under the supervision of the several elective county assessors and their deputies. Jefferson County, the most populous of the one hundred and twenty counties into which the state is divided, makes no systematic provision for assessments. It has no tax maps, nor does it keep adequate records of improvements. Yet, according to abundant testimony, it presents merely a typical example of county inefficiency in matters relating to assessments. The assessor, elected for four years, under constitutional prohibitions against reelection,³

¹ Special Tax Commission (Ky.), 1912-14. Cf. Appendix, p. 211.

² Ibid.

³ Constitution (Ky.), §§ 99, 104.

cannot have acquired the experience, even if he possessed the inclination, to institute reforms on his own initiative. As the incumbent of the office frequently hopes for political preferment, it is scarcely to be expected that the inclination to make drastic changes in assessment values will be strong.

The sheriff is the tax collector for both state and county.¹ It might be well to relieve him of such incongruous duties, and, in any case, methods of safeguarding collections ought to be installed. The Tax Commission of 1912-14 called attention to the shortcomings of the existing system by saying: "The assessment roll has ceased, except in theory, to be the warrant for the collection of taxes in Kentucky." Generally the roll stops with the assessed values and taxes are not set forth. The county clerk makes out tax bills and gives them to the sheriff for collection. "The government has no adequate means of establishing a claim to all money collected by the sheriff, nor has the sheriff any adequate means of defense against an accusation that he has collected money and not turned it over."²

The justice of this criticism may be tested by the following incident, told to the writer by a public accountant, who had been employed to unravel the financial entanglements of a certain county. It was discovered that the county assessor in collusion with the sheriff had omitted many names from the original assessment roll. These omitted persons had, however, been regularly assessed and the amounts collected withheld. After all taxes had been paid and the books totaled, the names of the "sleepers," as they were picturesquely dubbed, were inserted to avoid suspicion

¹ Statutes, §§ 4129, 4142, 4143, 4147. References to Carroll's ed., 1915.

² Special Tax Commission, 1912-14, pp. 19-20.

in case taxpayers wished to see the books. The insertions, made at different angles from the original entries, were easily discoverable. By comparing tax receipts with the assessment books, the amount of the defalcation was then ascertained and verified by comparison with the amounts due from the "sleepers."

But even with the best intent on the part of assessors and sheriff-collectors, the assessment list offers direct encouragement to lax administration of the tax laws. It comprises 73 items, items 1 to 12 including forms of intangible personalty; 12 to 19 comprising lands, city and town lots (improvements not listed separately); while items 19 to 73 inclusive cover tangible personalty of the usual heterogeneous kinds, ranging from machinery and raw materials to diamonds, books, and pianos. Many items ought to be omitted entirely, while others might be brought under some sort of intelligent group classification.

After the local assessments have been completed, a State Board of Equalization, consisting of the auditor and seven other members appointed by the governor from the several appellate districts attempt to correct inequalities of assessment among the various counties. The powers of the board are limited to increasing or diminishing total assessed values for the several counties. It is entirely unable to correct inequalities within the counties.¹

¹ Statutes, §§ 4268, 4274, 4275. Revenue agents appointed by the auditor for the several counties, together with four agents at large, are supposed to prosecute the collection of back taxes, taxes on omitted property, etc. There is also a supervisor of revenue agents, likewise an appointee of the auditor. The agents are paid by fees, the proceeds of fines imposed on delinquent taxpayers. Cf. Statutes, §§ 4258-67. The opportunities for doing effective work may be judged by the following decisions. It was held in the case of the Commonwealth v. J. M. Robinson, Norton and Co. (146 Ky. 218), that a statement in a proceeding by a revenue agent to assess omitted property, that the taxpayer had notes and mortgages worth \$31,000, which it had listed for assessment at \$3100; that it had accounts worth \$1,399,000, which were listed at \$7200; that it had in cash \$62,000, which was listed at \$10,000; and that its stock of goods worth \$819,000 was listed at \$224,000 . . . was insufficient for failing to describe the omitted property.

Apologists for the general property tax lay stress upon its elasticity as a revenue producer. But it has been deprived of this virtue in Kentucky, as a fixed rate has been imposed for a succession of years and the proceeds have been distributed under rigid statutory regulations,¹ namely — 21½ cents for ordinary expenses of government; 26 cents for common schools; 2 cents for the sinking fund; one-half cent for the agricultural and mechanical college; 5 cents for roads. The outcome of this rigid adherence to definite rates has been a yearly increase of disbursements over receipts until deficits have become persistent phenomena and have at last forced reforms upon the state.

Despite constitutional² commands that the whole resources of the sinking fund shall from year to year be set apart and applied to the payment of the interest and principal of the debt, some part of the recurrent deficit has been covered by drafts on this fund. However, the funded debt is at present negligible. One small issue of bonds, long overdue, has never been presented. The interest on another (irredeemable) bond of \$165,000 is paid to the state university and to the state (colored) normal school. As the other outstanding bonds (to the amount of \$2,315,627) are irredeemable, being held in trust by the Board of Education, the disbursements of the sinking fund normally³ consist of interest payments into the school fund and to the state institutions mentioned. Under the circumstances, there would seem to be no valid reason for the perpetuation of a sinking fund. The two cents of revenue placed annually to its credit

Cf. Kentucky Digest, 1911-14, p. 1961, § 362. It was also held in this same case, under Statutes, §§ 4241, 4260, relating to the listing of omitted property for taxation, that a revenue agent has no authority to have undervalued property reassessed for taxation.

¹ Statutes, § 4019, § 4356x-4. ² Constitution, §§ 47, 48; Statutes, §§ 4588-4606.

³ Auditor's Report (Ky.), 1914-15, pp. 54, 163, 164.

could perfectly well be paid directly to the beneficiaries under the bond issues, and the plan would have the merit of leaving no unappropriated balances to be drawn upon in event of fiscal emergencies.

In the Report of the state auditor for 1914-15 the sources of revenue are given alphabetically under seventy-one titles. The Special Tax Commission of 1912-14 endeavored to classify these revenues on some scientific basis. Returns were divided into:

- A. Taxes Proper, including: (1) The general property tax; (2) license taxes; (3) inheritance taxes; (4) tax on foreign insurance companies.
- B. State fees.
- C. Earnings [of] state funds, and sales.
- D. Institutional earnings, or refunds and kindred items.
- E. Fines and forfeitures.¹

Under the returns accredited to the general property tax are a number of levies which, because of peculiarities in kind or uniqueness in methods of assessment, deserve especial mention. The franchise taxes, the taxes on banks, trust companies, domestic life insurance companies, and the tax on distilled spirits, are all assessed by state officials, the proceeds being paid directly into the state treasury, contrary to the usual practice. Leaving out of account these administrative differences, the question may fairly be raised as to whether the franchise taxes — levied upon the intangible personalty (corporate excess) of public service companies — are not rather in the nature of excise or license taxes, paid for the privilege of carrying on business affected with a public interest. If other business enterprises were also taxed on their "intangible" capital values the legal classification of franchise taxes as

¹ Special Tax Commission, 1912-14, pp. 23-26.

ad valorem property taxes would have more validity.¹ As it is, only public service corporations are subjected to taxes upon their "intangible" as well as their tangible capital, and the franchise taxes are therefore additional impositions laid upon companies exercising special privileges.

The taxes levied on state and national banks and domestic life insurance companies are somewhat analogous to the franchise taxes, in that the methods of assessment are so devised as to enable the state to reach a certain amount of "intangible" property that, under ordinary methods of assessment, would escape taxation. Altho not computed in the same way as the franchise taxes, they are laid on the estimated capital value of the companies, less deductions for real estate locally assessed.² Obviously the state cannot legally levy franchise taxes upon national banks, but practically speaking Kentucky like many other states does make banking institutions a source of extraordinary revenue, while ostensibly taxing simply the capital stock, and collecting directly from the banks as agents for individual shareholders.

The Kentucky Bankers' Association, protesting against the system of taxation for banks in a brief presented to the Tax Commission of 1916 states that in 1915 the banks were assessed for approximately \$52,000,000 on their capital, whereas deposits in the banks amounting to \$140,000,000 were taxed at \$11,000,000. The total state assessment for deposits, accounts receivable, notes, bonds, and stock in foreign corporations only amounted to \$51,000,000. "Certainly," runs the comment, "no one believes that the citizens

¹ Kentucky Digest, May, 1911-November, 1914, § 117. "A franchise tax is not a license or occupation tax, but simply an ad valorem or property tax." *City of Newport v. South Covington and Cincinnati St. Ry. Co.*, 156 Ky. 403.

² Statutes, §§ 4092, 4092a, 4092b, 4092c, 4237a.

of Kentucky have invested as much in bank stocks as are invested in all of the above items."¹ To which it may be replied: certainly not; the fact is that banks can be easily reached and therefore have been called upon to pay special impositions.

The tax on distilled spirits, altho classified as an ad valorem property tax, is assessed in such a manner that a rate in excess of the average rate on general property is actually imposed. As previously stated, the tax is assessed by state officials and the proceeds paid directly into the state treasury. The assessed values are then certified to local assessors for local taxing purposes.² The tax need not be paid until the whisky is withdrawn from bond, but meantime interest on deferred payments is compounded at 6 per cent. This specially levied tax, assessed on a basis approximating full value, unquestionably brings in extraordinary returns. The very fact that distilled spirits have been singled out in this manner is best evidence that they are more heavily taxed than other forms of personal property.

¹ Taxation of Banks. Argument in behalf of Ky. Bankers' Association, p. 12 (Helm and Helm, General Counsel).

The brief sets forth that, as the average tax rate for state, county, and city purposes in the ten largest cities of the state is about \$2.80 per \$100 (p. 16), the banks are compelled to pay as agents for their stockholders sums equivalent to an income tax of over 46 per cent.

It ought to be noted, however, that the burden of these heavy taxes is partially offset by the fact that the companies, after paying the local realty taxes and the tax on capital stock, are freed from all taxes on their investments. Hence trust companies, for example, doing a mortgage loan business have succeeded in securing a practical monopoly of this field of investment in the districts where they do business. They may issue their own title bonds, bearing interest at 5 per cent perhaps, and then invest the proceeds in untaxed mortgages yielding 6 per cent or more. Needless to say, private lending becomes a negligible factor under such circumstances.

It is also advantageous to the banks to have their property assessed with greater uniformity than most property within the state. The tax is assessed by state officials for state purposes only, the local authorities adopt more or less uniform methods of assessment based upon the state practice. The result of this greater uniformity is that the banks can more easily shift the tax burden to their customers in the form of higher interest rates. This shifting would be attended with great difficulties under a system of erratic local assessments. In any case, the resultant high loan and discount rates operate as a discouragement to the rapid development of credit facilities.

² Statutes, § 4108.

The total receipts from the above mentioned taxes amounted in 1914-15 to \$817,418, divided as follows: ¹

Railroad franchises	\$278,205
Miscellaneous corporations	171,833
National banks	117,842
State banks	99,678
Distilled spirits	149,860

Taxes levied on the tangible property of the railroads (assessed by the Railroad Commission) amounted to \$353,105, while the largest single item listed by the auditor and accredited to the general property tax was the sheriff's revenue (based on local assessments of property within the counties) which amounted to \$4,151,016 (1914-15).² The returns from all these sources constituted \$5,321,539, out of total receipts amounting to \$7,853,302. Under receipts, however, a number of minor refunds and also certain bookkeeping entries are recorded, which help to swell the above totals somewhat unduly. Among the largest of these items, for example, are fines and forfeitures of \$234,293, from which commissions to the amount of \$161,945 ought to be deducted, while from Jefferson County fees, totaling \$270,429, \$195,673 of expenditures should be subtracted.³

Other Taxes

In addition to the levies which are classified as general property taxes, there is an inheritance tax ⁴ and a heterogeneous collection of business and license taxes,

¹ Auditor's Report, pp. 128, 129.

² The above amount includes the road tax, which is listed separately. As stated in the Report of the Special Tax Commission, 1912-14 (p. 22), some of the funds paid into the treasury are reported *en gros* and some are net returns. The revenue collected by the county sheriffs is much in excess of the amounts given above. The Board of Equalization reports taxes due (sheriffs' revenue and road tax), 1915, at \$4,879,275, a difference of over \$728,000, largely accounted for by commissions on collections and tax delinquencies.

³ Auditor's Report, pp. 128, 129, 155, 156, 218. ⁴ Acts, 1916, Kentucky, c 26.

which bring in a considerable income.¹ The inheritance tax law was materially changed during the last regular session of the legislature (1916). Originally a flat rate tax of 5 per cent on collateral inheritances with an invariable exemption of \$500, it has been metamorphosed into a general inheritance tax, with graded rates of taxation and varying exemption maxima. The amount received from the inheritance tax in 1914-15, before the new rates went into effect was \$121,433. In the future, income from this source will probably be considerably increased.

The innumerable license taxes on businesses, professions, occupations, etc., are published in the auditor's Report under the title: *Clerks (license taxes, etc.)*. Some of these licenses are imposed for regulatory purposes, while all are regarded as an easy means to the end of more revenue. Receipts under this head amounted in 1914-15 to \$454,547. In addition, a separately listed dog tax brought in \$86,560. The motor license fund was credited with \$118,874. A tax on breweries produced \$6300; that on rectifiers \$39,461; and that on wholesale liquor dealers, \$20,600. A corporation license tax bringing in \$119,229 (1914-15) is imposed annually on both domestic and foreign companies. It amounts to 30 cents for each \$1000 of authorized capitalization, represented by property owned and business done in the state, the minimum payment, however, being \$10.² Parenthetically, it may be said that the list of companies incorporated in Kentucky, which is filed in the office of the secretary of state, ought to constitute a valuable index to the amount of the authorized capitalization of domestic companies. Unfortunately many defunct corporations are still listed as extant and the books contain duplications

¹ Auditor's Report, 1914-15, pp. 128, 129.

² Statutes, §§ 4189c, 4189d.

that lead to further errors. They do not, therefore, as they might, constitute an accurate check upon the returns made to the auditor's office for license taxation. A final important source of revenue is secured by a tax levied on the gross receipts of foreign insurance companies at a rate of \$2 per \$100. The payments amounted to \$323,750 (1914-15).¹

Of the total receipts from all sources, amounting to \$7,853,302 in 1914-15, \$3,373,582 was credited to the school fund; \$218,297 was transferred to the sinking fund; and \$54,565 went to the state university² leaving \$4,206,856 in the general expenditure fund. No attempt has been made in the auditor's Report to classify disbursements from the general expenditure fund. The amounts paid out by the issuance of warrants are arranged alphabetically under one hundred titles, total payments under each head being recorded monthly and annually. Salaries are listed separately without reference to the departments or the functions of the salaried individuals, whose names and official titles simply appear in alphabetical order. The result is a minimum of information which leaves the public virtually uninformed concerning the objects for which public funds are utilized.³

Franchise Taxes

As the provisions relating to franchise taxes, and taxes on banks and domestic life insurance companies are involved pieces of legislation, they require more detailed scrutiny than they have received in the preced-

¹ Statutes, §§ 4226, 4229. To levy taxes on gross receipts is a very usual, altho theoretically undesirable, method of reaching insurance funds. Given the difficulties of dealing with interstate corporations, such as these, no change in the method of taxing them has been suggested, altho, obviously, a tax on net premiums would fit more logically into the plan hereinafter proposed.

² Auditor's Report, 1914-15, p. 130.

³ *Ibid.*, pp. 155-162.

ing cursory survey. The franchise taxes are assessed by the State Board of Valuation and Assessment and by the Railroad Commission. The former important board consists of the auditor, the treasurer, and the secretary of state¹ — elective officials who may or may not have the slightest knowledge of the technical matters concerning corporate assessments that they will be called upon to decide. The Railroad Commission, consisting of three appointees of the governor, is entrusted with the task of valuing the tangible property of railroads and of such electric railways as do not fall entirely within a local taxing district. The Board of Valuation is supposed to ascertain franchise values by deducting the assessed value of tangible property from the total capital value as computed by it. Altho, in the case of railroad franchises, the work of assessment is divided between the two boards, there seems to be little coöperation between them. Until the last fiscal year, the Board of Valuation has been a year behind the Railroad Commission in making assessments. For example, the franchise valuations fixed in August, 1916, were not based on the returns for the fiscal year ending July 30, 1916, but on the returns for the preceding year. The Board of Valuation planned to make two assessments in the summer of 1916 in order to bring its work up to date. The division of the work of assessment has always been, as the Railroad Commission stated in its 35th Report, "inconvenient, complicated, and calculated to confuse the public." The Commission also emphasized the difficulty of valuing the tangible property of the roads as such, without taking into account the intangible elements that give them value. The Railroad Commission apparently has never based its assessment upon any scientific methods

¹ Statutes, § 4077.

of appraisal. Indeed, it has admitted its failure even to obtain the facts essential to any adequate valuation, stating that the filed reports of the companies give meager information and are criticized by witnesses as misleading.¹

For the other public service companies subject to franchise taxation, such as gas, electric light, bridge, ferry, water, and street railway companies, assessments are made by the Board of Valuation alone, and deductions for tangible properties, assessed locally, are based on returns from county clerks. In cities of the first class — i. e., Louisville — the city assessor may and does make independent assessments of franchise values for all but traction companies.² For these latter, he must accept the valuations certified to him by the state boards.

All franchises are taxed, not only by the state, but by the counties and other municipal taxing units. A company doing business in Louisville may pay state and county taxes on one basis of valuation, and city taxes on another basis which may diverge from the state assessment to a considerable extent.

What is the method used to determine franchise values? The forms on which the companies report, ask for statements of the amount of capital stock (par and "real" value); bonded and other indebtedness; surplus; undivided profits; other assets. A company is asked to state its gross earnings, and the net earnings are then computed by deduction of the following items: salaries, wages, interest, dividends, enlargement of

¹ Statutes, §§ 4096-98. Thirty-fifth Annual Report of the Railroad Commission, 1914, pp. xxiii, xxiv. In accordance with recently passed legislation, the railroads will be required to furnish the assessing authorities (i. e., a newly created State Tax Commission) upon request, copies of all reports of earnings made to the Interstate Commerce Commission. Chap. xi, § 10, Acts, Ky., Extraordinary Session, February-April, 1917.

² Statutes (City Charter), § 2984a.

plant, maintenance of equipment, depreciation and other expenses. Then comes a statement of the amount and value of tangible property in the state together with its location; and finally the value of all property, tangible and intangible, owned outside the state. Railroads must also give the length of the lines owned, leased, or controlled in each county, city, town and taxing district; their total mileage; net and gross earnings inside and outside the state on business done in the state; and total net and gross earnings. In order to estimate the capital value of the companies reporting, the Board of Valuation and Assessment usually capitalizes net earnings at 6 per cent and then reduces this total 20 per cent, on the assumption that other property in the state is not taxed at full value. Last year the Board planned to assess at full value on a 7 per cent basis of capitalization.¹ From the capital value so computed the value of the tangible property is deducted, the remainder representing franchise value or intangible personalty — that which in some states is called the corporate excess.

It should be said that the net earnings which are actually capitalized are not identical with the net earnings as returned in the franchise tax statements, the latter representing merely an undisbursed surplus. The net returns are properly taken to include interest on bonded indebtedness, dividends, and enlargement of plants. An examination of returns, filed in the auditor's office, also revealed the fact that some obviously padded pay rolls and unnecessarily large allowances for depreciation had been made to contribute their quota to the demarcation of *net earnings*. When it was evident that business had been bad, and dividends not earned, the Board exercised discretion in valuing capital

¹ Information unpublished.

stock, sometimes reducing that value below the amount that would have obtained under a strict application of its rule. Indeed, the Board seems to have considerable latitude in the selection of methods of finding capital value.

But the Board of Valuation has little detailed information at its disposal and that which it has is not likely to be reliable. The forms on which reports are made afford too many loopholes for misstatements and mistakes, even on the part of the well-meaning. There is no definition of terms, no recital of items to be included or excluded under the several headings. There is no way of knowing, for example, how the various companies have interpreted the permission to make allowance for depreciation, how they have distinguished between outlays for enlargements and for maintenance, what returns they have seen fit to include under gross earnings. In short, there is no method for checking the correctness of these statements, unless discrepancies are patent on their face.

The taxes levied on banks, trust companies, and domestic life insurance companies are taxes on presumable personalty, collected from the corporations as agents for their shareholders.¹ As previously stated, values are determined independently for state purposes and state taxes are paid directly into the state treasury. The procedure for estimating capital value is somewhat extraordinary and wholly irrational. To the amount of the capital stock, taken at par, is added 80 per cent of the surplus and undivided profits, the sum being regarded as the capital value. The value of real estate, locally assessed, is then deducted, to obtain the value of the intangible property for purposes of state taxa-

¹ Domestic life insurance companies have their capital stock valued by methods similar to those employed in valuing bank stock. They are not taxed on gross receipts.

tion. For local tax levies, independent assessments of this same intangible property are made.¹ The writer has been told that the provision permitting deduction of realty values gives rise to certain well-known evasions, such as the temporary deeding of property to the companies for the purpose of reducing assessments.

Individual holders of shares of stock of public service companies subject to the franchise taxes, and owners of bank and insurance company stock, are exempt from further taxes.² But in the taxation of foreign corporations doing business within the state, a curious situation arises. Such a company must pay a tax on at least one per cent of its total business, but even if it pays no more than this minimum, the resident holders of its securities have heretofore been as completely exempted as if they owned the stock of fully taxed domestic corporations.³ If the public service companies in question are adequately taxed in the other states where they are doing business, no special discrimination arises in favor of holders of foreign stock as against domestic stockholders. On the contrary, a tax levied by Kentucky on owners of such stock would constitute an extra burden. But since resident owners of the stock of foreign public service companies, doing no business at all within the state, are taxable on the full value of their shares, there

¹ Returns secured from auditor's office, Frankfort, Ky. This past year the Board of Valuation and Assessment planned to assess surplus and undivided profits at 100 per cent. The customary half-way method certainly has nothing to commend it, altho the attempt to assess at full value may meet with protests based on the ground that other forms of property are underassessed.

For example, a bank with a capital of \$100,000; surplus, \$20,000; undivided profits, \$2000; and real estate, \$15,000 would be assessed by the State Board for \$100,000 + (.80 × 22,000) = \$15,000 = \$102,600.

² Statutes, § 4088.

³ Shareholders of all corporations paying taxes on property in the state, whether franchise or non-franchise corporations, whether foreign or domestic, are exempt from Kentucky taxation, as expressly decided in *Commonwealth v. Fidelity Trust Co.*, 147 Ky. 77; 143 S. W. 1037. For recent changes in legislation cf. chap. xi, §§ 2, 3, Laws of Kentucky passed at Extraordinary Session, 1917.

does result rank and unjustifiable discrimination between the two classes of owners of foreign securities. With the present lack of interstate comity in matters of corporate taxation, injustice is inevitable. Only when uniform taxes are levied on all corporations in all states, the individual shareholders being tax exempt, will substantial justice be possible.

The method of allocating the franchise values of companies doing an interstate business is set forth in several involved and inconsistent statutory provisions,¹ which have recently received judicial interpretation in the United States District Court for the Eastern District of Kentucky, in connection with a controversy between the State Board of Valuation and the railroads, the result of a sharp increase in the assessment of franchise values.² The decision in the principal case or cases rather,³ growing out of suits brought by the L. and N. does not altogether clarify the obscurities of statutory phraseology. The court held that the Board of Valuation had used an improper basis for apportionment in taking an average of net income, gross income, and mileage proportions. It should have employed the mileage basis exclusively, subsequently allowing for necessary additions or deductions. The court was nevertheless of the opinion that the estimated value of the property was possibly correct, despite incorrect methods of computation. However, the company contended further that the bulk of assessable property was returned at less than 60 per cent of its fair cash value, inclusive of assessments made by the State Board of Equalization, and it alleged that the Board of Valuation taxed the banks and trust companies on an 80 per cent

¹ Statutes, §§ 4079-81.

² The franchise value of the L. and N., for example, assessed at \$11,899,000 in 1911 was raised to \$45,428,000 in 1912. Cf. Auditor's Report 1914-15, pp. 264, 265.

³ L. and N. v. Bosworth et al., 209 Federal Reporter, 380; 230 Federal Reporter, 191.

basis. A violation of the fourteenth amendment was therefore claimed. By a decree announced in 1915, the state was enjoined from collecting taxes on an assessment basis exceeding 60 per cent of estimated actual value, Judge Cochran conceding that, "if the property in this state subject primarily to assessment by the county assessors was uniformly assessed for the year 1913 at less than 60 per cent of its fair cash value, and the board of valuation and assessment in assessing plaintiff's franchise applied as to the portion of its unit in this state as the standard of valuation thereof full fair cash value, or slightly less than or about 80 per cent thereof, it violated the fourteenth amendment." The railroad took an appeal from this decree to the United States Supreme Court on the ground that it ought not to pay franchise taxes upon any amount in excess of the sum upon which it was then taxable. The defendants, for the state, took a cross appeal, alleging that the plaintiff was entitled to no relief. The Supreme Court held that the lower court had erred in making the easy assumption that the same valuation reached by the Board through an incorrect method possibly might have been reached had a correct method been employed. Hence the decree upon plaintiff's assignments of error was reversed and the case remanded to the District Court for further proceedings; but so far as the defendant's assignments of error were concerned, the decree was affirmed.¹ The state has consequently had to relinquish claims to substantial sums involved in this litigation and in other similar suits.

A peculiar case is that of the Southern Pacific, which has to pay taxes on intangible property amounting to \$8,250,000, altho it does not own a mile of trackage in Kentucky. It maintains an office *pro forma*, in Jefferson

¹ United States Supreme Court Advance Opinions, August 1, 1917, p. 683, L. and N. Railroad Co. v. Greene et al.; Greene et al. v. L. and N. Railroad Co.

County, located discreetly outside the city limits. Otherwise the city, as well as the state and county, would be able to tax its \$8,250,000 worth of "property."¹ It is taxed in accordance with the provisions of paragraph 4081 of the Statutes, which, after dealing with the franchise valuation of interstate carriers, continues as follows: "but if any such railroad or other corporation organized under the laws of this state have all of its lines outside of this state, the said board shall fix the value of its entire capital stock as hereinbefore provided, and apportion to this state for taxation therein, the proper proportion and not less than one per cent of its said capital stock, and the amount so apportioned shall be the value of its intangible property, including its corporate franchise, stocks, bonds, securities and choses in action, subject to taxation in this state and in the county, city, town and district where its principal place of business in this state may be located." The case is illustrative of the anomalies growing out of the incorporation of companies in alien jurisdictions. It is much to be hoped that the time may arrive when companies in taking out charters will be limited to those states where they are actually doing business.

County Finances (Jefferson County)

It has already become apparent that the county plays an important rôle in the administration of state tax laws. The local assessor and his deputies value property for state as well as for county purposes,² while the sheriff collects both state and county revenues, turning

¹ *Commonwealth v. Southern Pacific Co.*, 150 Ky. 97.

² Statutes, § 1883. The inadequacy of county assessment methods has been sufficiently emphasized. The County Board of Supervisors, a local board of equalization, consisting of five "intelligent discreet housekeepers and owners of real estate" could do little to remedy mistakes, even if the members of the board chanced to have any qualifications for their task. Cf. Statutes, § 4115.

the former directly into the state treasury, however, and transferring the latter to the county treasurer. The county treasurer, in his turn, makes an accounting to the fiscal court whose appointee he happens to be.¹

In the counties of Kentucky, there exists a form of commission government through the several fiscal courts, which has long since become thoroly discredited, despite the fact that responsibility for maladministration can be definitely placed upon this body. The fiscal court is composed of the county judge, who is *ex officio* chairman, and of the justices of the peace who are elected for each magisterial district within the several counties.² In Jefferson County, there are eight justices. These groups of local elective magistrates are in practically unsupervised control of county affairs. They issue orders and execute them. They levy taxes and disburse appropriations. Within the limits set by the liberal maximum rates permitted by the state,³ they are licensed to raise and to spend money as freely as they choose for the various matters that come within their jurisdiction. As the centralization of governmental functions has not proceeded very far in Kentucky, the fiscal court is accordingly a powerful institution. Yet information about county affairs is scant.⁴ Without official sanction for asking questions it is difficult to obtain even the most superficial knowledge of county revenue systems. Through the medium of the newspapers Jefferson County publishes a few meager, unenlightening details concerning the amount raised by taxation and its proportional distribution among the various funds. From outside sources, such as the

¹ Statutes, §§ 932, 933, 4143, 4147.

² Constitution, § 144; Statutes, § 1833.

³ Statutes, § 1839.

⁴ The Report of the Special Tax Commission (1912-14) stresses the difficulty of securing answers from county officials. It is stated (p. 28) that "we did not try to go into the matter of school district special taxes for the obvious reason that if we could not elicit from the county officers in an intelligible form the simple facts concerning county rates, it would be hopeless to ask for more data of a far more complex character."

reports of public accountants called in to audit the books of the sheriff and the treasurer,¹ and from personal interviews with officials and others, a modicum of information relating to the finances of Jefferson County has been secured.

The receipts consist almost entirely of the returns from the county tax levy (i. e., the general property tax) and of returns from the franchise taxes, bank and insurance taxes, and whisky taxes — in short, the same taxes which constitute the principal sources of state revenue.

The assessment base for the county tax levy is, as has been shown, locally determined for state and county. The auditor certifies franchise values, as ascertained by the Board of Valuation, to the several county clerks, who in their turn notify the collecting officers. The Railroad Commission likewise certifies the value of the tangible property of the railroads within the counties. Assessments of banks and of trust companies and insurance companies are made independently by the local authorities.

Total collections by the sheriff of Jefferson County (February 1, 1914 to February 1, 1915) for county purposes, amounted to \$732,870,² exclusive of commissions. Of this sum, \$528,151 was secured from the county levy, at a rate of 29 cents (exclusive of commissions of \$22,318).³ Franchise taxes brought in \$88,391; railroad taxes on tangible property yielded \$50,478; banks,

¹ Reports on sheriff's accounts for Jefferson County and on treasurer's accounts, made by public accountants to the fiscal court, for 1912-13, 1913-14, 1914-15. Cf. also United States Census (1913) volume on Wealth, Debt, and Taxation, for general information concerning county finances.

² Report on sheriff's accounts filed with clerk of the fiscal court, Jefferson Co., February, 1914-15.

³ The sheriff's commissions on collections amount to 10 per cent on the first \$500 collected, and 4 per cent on the remainder. In no case, however, is the compensation to exceed \$5000. Cf. Statutes, § 1729. The total amount due on an assessment basis of \$304,890,830 at 29 cents per \$100 was \$504,183. Commissions and delinquencies reduced the amount to the above figure.

trust companies and insurance companies paid \$23,579; and whisky taxes contributed \$26,203. Expenditures for roads and bridges constitute, roughly, one third or more of the total disbursements. The salary item is next in importance, altho during the present year it will be subordinated to a 5 cent levy to go toward the elimination of a deficit which has been accumulating for several years and which there can be no legitimate excuse for having incurred, the tax levy being well within the statutory limits. After expenses for the upkeep of the jail, armory, and courthouse have been met, there is not a large sum left to devote to the care of the sick, dependent, and needy.

The county judge, however conscientious a chairman he may be, cannot control expenditures without the coöperation of the other members of the fiscal court. A former county judge referred with considerable bitterness to a certain occasion when a majority of the members of the court voted to pay a contractor for work not conforming to specifications. The chairman protested, but had no redress. He ordered the county attorney to prosecute the case against the contractor by appealing from the decision of the fiscal court. The county attorney ignored the order, however, and the contractor received pay for work that he had not done. The instance was cited as only one of many cases of fraudulent dissipation of funds, that had been forcibly brought to the attention of the county judge. So long as county affairs remain enveloped in secrecy, abuses will continue. Greater publicity, combined with an adequate system of cost accounting, would considerably reduce county budgets, and contribute to the solution of the revenue problem.

The prevalent fee system is also an incentive to wasteful expenditure. The magistrates receive fees for at-

tendance at the sessions of the fiscal court and at committee meetings¹ (which may be called to suit their convenience). As a county official confessed, it is not surprising that superfluous sessions of the fiscal court and unnecessary committee meetings are occasionally held. Apart from the inadvisability of leaving the control of the financial affairs of the counties entirely in the hands of elected magistrates, subsisting precariously from such fees as they can corral, another grave disadvantage is inherent in the system. The fiscal court is an institution which brings administrative and judicial functions into too close association. The county judge as a judicial officer has multifarious duties to perform and ought not to be burdened with the executive tasks that fall to the lot of the chairman of the fiscal court. Two men who have recently occupied positions as county judge have admitted to the writer that they were unable to reconcile such different lines of activity.

Under a law recently passed,² the counties have the option of substituting a board of three commissioners, elected from the county at large, who, together with the county judge, shall constitute a new type of fiscal court. Upon petition, a referendum vote must be held to decide whether a change shall be made. Jefferson County has voted to adopt the new plan and the commissioners will assume office January 1, 1918. The writer does not believe that the substitution of a board of commissioners for the present picturesque survival of an earlier political age will effect any marked permanent improvement in the financial administration of the county. To be sure the change is in so far an advantage that the commissioners will be men supposed to devote all their time to their official duties, as they are to be paid adequate salaries. But the county

¹ Statutes, § 1845.

² *Ibid.*, §§ 1847-49.

judge remains saddled with incompatible duties for whose execution he has neither time nor probably aptitude. Judging from the reports of county management in other states, there is little reason to think that the members of a county board, whose election will depend upon political affiliations — at least it will after the flush of the enthusiasm for reform has faded — and who will be possessed of a large amount of patronage, direct and indirect, will be likely to perform their duties with the requisite economy and efficiency. Until a responsible state government assumes rigid supervision of county finances, extravagance and inefficiency will no doubt continue. In Jefferson County, moreover, there is wasteful duplication of work because of an utter lack of coöperation between city and county officials. The county assessor and his deputies, maintain an organization entirely distinct from that of the city assessor, altho with a very slight additional expense one office could do the work of assessment for city and county, and do it much more effectively at that.

At the present time one hundred and twenty counties with very unequal populations and of very unequal wealth are raising and disbursing funds for purposes that ought to be of more than local concern. True, the inability of many of the counties to provide for local educational needs from local revenues, has been recognized in the distribution of the state school fund on a per capita basis. The result is that eighty-six counties pay less into the state treasury than they receive as subsidies for the payment of their school teachers. There is nevertheless a need for fewer counties and for a lesser degree of local autonomy in the management of educational, penal, and charitable institutions. It is patent that Adair County with a per capita assessed valuation of \$163 and Magoffin with a per capita valuation of

\$109 are unable to supply the needs of their residents as effectively as can Jefferson County with a per capita assessment of \$798 or Fayette County, in the Bluegrass section, with a per capita assessment of \$859.¹

It is interesting to note that the inequality in the assessment bases does not result, as it has in Massachusetts townships, in spectacular differences in local rates. The local rates for state and county, including the special school levy, approximate \$1.20 per \$100 in the majority of cases. Differences in the ratios of assessed values to true values cause actual rates to exhibit somewhat greater variations, but these variations do not always make for heavier tax impositions in the poorer counties. In some of the very poor counties, the rate is below the average, testifying to the fact that local standards of governmental efficiency must be deplorably low. It will hereafter be shown that the state has already undertaken a centralization of functions which, however faulty at its inception, may eventually bring about a more unified state activity, and help to give to all its citizens a more equal share in community progress.

School District Finances

So far no account has been taken of county expenditures for education, because sums raised and disbursed for school purposes are managed as separate funds. Kentucky has a State Board of Education,² whose chairman, the state superintendent of public instruction, has general supervisory and inspecting powers over the county school systems. County superintendents, elected

¹ Twenty-first Biennial Report of the Bureau of Agriculture, Labor, and Statistics, pp. 13-50. Cf. also Special Tax Commission, 1912-14. Appendix, p. 211 seq. According to this report land is assessed at 46 per cent of its value in Adair County; 56 per cent in Magoffin; 60.5 per cent in Jefferson; 84 per cent in Fayette.

² Common School Laws, Ky., 1916, vol. ix, no. 4, p. 10, chap. iv.

after qualifying examinations, are at the head of the local county systems, exclusive of the cities whose independent organizations do not come within their jurisdiction.¹ The salaries and expenses of the county school heads, however, are not paid out of the special school fund, but from the proceeds of the general county levy, to which the cities as well as the rural districts contribute.²

Each county is divided for administrative purposes into school divisions, which, in turn consist of school subdistricts.³ Separate districts, which are not coterminous, are established for white and colored schools. The majority of the districts have given up their one-time status as independent taxing units, for provision has been made since 1908 for a special county school levy of 20 cents per \$100.⁴ The sheriff collects this levy for the County Board of Education and transfers it to the county superintendent, who acts as treasurer of the Board. The latter subsequently settles his accounts directly with the county judge, as chairman of the fiscal court.⁵ The sheriff's commission for the collection of school taxes is allowed by the fiscal court, and not by the Board of Education.⁶ A few graded school districts still remain, which do not contribute to the county fund and, in consequence, receive no benefits from the fund. These districts usually impose considerably higher rates of taxation, the maximum permitted by law being 50 cents per \$100.⁷ In Jefferson County,

¹ *Ibid.*, p. 11, chap. v; p. 17, chap. vi.

² *Ibid.*, p. 19, § 50.

³ *Ibid.*, pp. 32-33, chap. viii. There must not be less than fifty children in each school district. Funds are supposed to be distributed impartially to white and colored districts as individual needs demand.

⁴ *Ibid.*, p. 56, chap. x, § 129.

⁵ *Ibid.*, p. 23.

⁶ *Ibid.*, p. 57. The county revenue tax and the county school tax are one fund in estimating the sheriff's commission for collections. *Commonwealth v. Mackay*, 168 Ky. 58.

⁷ *Common School Laws*, p. 61, § 136; p. 65. The property of no white person may be taxed to maintain colored graded schools, nor vice versa. A colored common school

for example, there are five graded school districts out of a total of sixty-six white districts. During 1915-16 the sheriff of Jefferson County collected \$60,745 from the 20 cent general levy and \$57,083 was received from the state treasurer. Of this latter sum, \$14,728 was distributed among the five graded school districts.¹

As previously stated, local school levies are supplemented by subsidies from the state treasury.² Of the \$3,336,724³ distributed to the counties in 1914-15, Jefferson County received \$312,432, \$47,976 of this sum going to the county, exclusive of the city, and \$264,456 going to Louisville. Estimated on the basis of the 1915 assessment, Jefferson County probably contributes about \$700,000 to the state school fund. As Louisville pays about 80 per cent of all taxes raised in the county for state and county purposes, the city gives approximately \$560,000 to this central fund. City and county therefore have to subsidize the state heavily, and there is grumbling in consequence. But the showing of the poorer counties imperatively evidences the need of such subsidies, altho there are serious criticisms to be made of the methods of distribution. Even as it is, the variations in per capita expenditure for school purposes are to say the least, highly distressing.

district may embrace the white graded school district within its territory, and the County Board of Education has complete control and jurisdiction over such territory for colored school purposes.

¹ Financial Statement, Jefferson County Schools, July 1, 1915 to June 30, 1916. Report of County Superintendent.

² It was pointed out by the state superintendent in his Biennial Report for 1914-15 that, altho it may not be wise to prevent local districts from levying higher rates than the average, if they can afford it, it is not at all desirable to permit these wealthier districts to evade the general county tax. Cf. Report, 1914-15, p. xi.

³ Auditor's Report, 1914-15, pp. 59, 167. These sums are to be used only in payment of teachers' salaries. In addition to the 26 cent state levy, interest on bonds to the amount of \$2,315,627, held as an irredeemable trust fund, is paid into the school fund.

City of Louisville

The cities of the state are incorporated under so-called general laws, applying to six classes of cities and towns, grouped according to population. They are subjected to constitutional and statutory restrictions which are rather severely explicit in matters relating to revenue and taxation. Among the constitutional limitations is the usual provision fixing the maximum municipal tax rate. It cannot exceed \$1.50 per \$100 for other than school purposes in towns and cities of 15,000 inhabitants or more. Then there is the familiar limitation upon indebtedness, which is not to exceed 10 per cent of the assessed valuation of property in cities of the first and second classes. Debts must be paid within forty years and a sinking fund created for this purpose. No tax exemptions, except those specifically mentioned, are permissible.¹ Louisville, like the other cities, ostensibly is governed under a general law entitled, "An Act for the Government of Cities of the First Class." But as it is the only city in this class (i. e., the only city having over 100,000 inhabitants) the act is in fact special, altho it follows the general lines laid down in the laws applicable to the smaller cities and towns. The charter imposes the old type of bicameral legislature: a board of twenty-four councilmen, two from each ward, and one of twelve aldermen. All proposals for raising revenues must originate in the council. The mayor may disapprove items in appropriation bills but his veto can be overruled by the conventional two-thirds vote. This orthodox scheme of city government of course leaves an immense power in the hands of ward politicians, who in

¹ Constitution, § 170. The customary exemptions are made for eleemosynary and educational institutions. Exemption of household goods to the amount of \$250 is permitted to each head of a household. Factories established in an incorporated city or town may remain exempt from taxation for five years.

their turn are apt to be the tools of the local political machine.

The charter provides that the city auditor, the treasurer and the tax receiver shall be elected at the time of the mayoralty election. The comptroller is appointed by the mayor, with the approval of the aldermen, while the assessor is selected by the general council. Such variations are of course in the class of inexplicable statutory vagaries.

A Board of Public Safety and a Board of Public Works are provided for in the city charter, each board consisting of three members, appointed by the mayor. Despite an imposing list of functions, the city probably could well afford to dispense with the services of these political appointees, who are sandwiched in between the mayor and his departmental heads. The Board of Public Safety has control, within limits set by ordinance, of all matters relating to fire, police, and health departments; public buildings, pounds, pensions, markets, charitable, reformatory and penal institutions. The Board of Public Works supervises the construction, cleaning, grading, repairing, etc., of streets, public places, bridges, sewers, drains, etc. Both boards submit annual budgetary estimates to the mayor and the amounts appropriated to their use remain as separate funds with the city treasurer. The boards, however, have no power to divert the tax levy to departments for which it was not originally appropriated. A large number of officials and minor employees owe their appointments to these boards, but the number that may be employed, together with the salaries paid, are definitely fixed by ordinance.

The cumbrous machinery of the city government affords opportunity for the installation of superfluous functionaries and for the payment of needlessly large

salaries. Simplification of a radical sort is required, so that responsibility for extravagance and maladministration can be placed squarely where it ought to rest — on the shoulders of the chief executive. Concentration instead of dissipation of responsibility would aid greatly in cutting down the city budget.

The revenue of the city comes largely from sources identical with those tapped by the state and county. Receipts from general property taxes September 1, 1914, to August 31, 1915, amounted to \$3,451,767 at a rate of \$1.85 per \$100.¹ Of the total assessment of \$210,000,000, \$61,350,000 represented the value of land; \$73,000,000, the value of improvements; \$9,500,000, the tangible property of bridge and railroad companies; and \$66,150,000, the value of personal property and franchises.²

The realty assessments are made with considerable care, altho no formal system of valuation is employed. The assessor and his deputies exercise their "judgment" in fixing values. They are aided in their work by the possession of a very good and complete set of maps. Improvements are valued separately and are carefully catalogued, and the assessor tries to secure all the information that will help in the ascertainment of costs. No attempt is made to assess at full value, but it is the ambition of the assessor's office to achieve at least a 70 per cent valuation. As usual, property in the residential districts is frequently over-valued and holdings in the business section go far below the 70 per cent basis. The assessments are finally fixed by a city Board of Equalization, consisting of three members selected by the Board of Aldermen.³

¹ Report, City Comptroller, 1915, Exhibit no. 2, p. 9; cf. also Exhibit no. 4; \$3,846,663 received from taxes, including back taxes.

² *Ibid.*, Exhibit no. 3, p. 15.

³ Statutes, § 2993.

The itemized statement of personalty subject to taxation, obtained from the assessor's office (not even the total amount of taxable personalty is separately published) shows that the city assessor does not reach intangible property any more successfully than the county officials. The value of taxable bonds, for example, was returned at \$1,440,791; of stock, at \$668,762. The amount of cash on deposit in the banks was given at \$1,693,568, whereas the reports of the state banking commissioner and of the United States comptroller credited Louisville banks with more than \$38,800,000 of deposits.¹ The total amount of personalty taxes was \$34,842,000, of which \$12,979,000 represented intangible property.

The franchise taxes are collected from the same companies that are liable for state and county payments on their corporate excess. The Louisville assessor may, however, make independent valuations for purposes of local taxation, except in the case of railroad companies and of interurban street railways. The franchise values of the last-named are certified to him by the State Board of Valuation, while the assessed values of the tangible property within the city limits are determined by the Board of Railroad Commissioners. Otherwise the city assessor is under no compulsion to accept the findings of the state authorities, and as a matter of fact he does not do so. Certain discrepancies may be attributable to the fact that the fiscal years of the state and city do not coincide; and reports made by companies, altho presented in the same form, do not cover the same period. For example, in 1914-15, the county valued

¹ United States Comptroller of the Currency, vol. ii (1915), p. 194. Individual deposits in national banks of Louisville \$21,049,000 (September 2). Report, State Banking Commissioner, 1914-15. Deposits in state banks and trust companies of Louisville, \$17,758,000. The United States comptroller of the currency estimates individual deposits in all Kentucky banks at \$133,393,000. Cf. vol. ii, Report (1915), p. 982.

the franchise of the Louisville Gas and Electric Company at \$5,029,430, whereas the city assessor placed the value at \$5,349,445.¹ In the assessment of banks, trust companies, and domestic life insurance companies, similar variations occur, not only between city and county valuations, but likewise between county and state, since county officials are permitted to make independent assessments of the capitals of the companies in question. Even a lack of correspondence in the time covered is not an adequate explanation of a discrepancy of \$232,000 in the assessment values for city and county of one large trust company, or of a difference of \$73,000 in the case of a bank whose total value for purposes of city taxation is placed at \$310,000, and for county, at \$237,000.² If the city assessor has any rigid formulae for computing franchise and bank capital values, it is not a matter of common knowledge and the writer was unable to secure any enlightenment concerning methods employed. In any case, the differences that have been cited can hardly be explained on rational grounds. They are evidence of a duplication of the work of assessment which is useless, expensive, and, judged by the erratic results, unjust to the companies concerned.

The charter of the city contains a provision that the general council may impose various license taxes other than those specified by statute, the proceeds to be paid into the sinking fund.³ The council has liberally availed itself of this blanket permission to extend the system of license taxes and there are now nearly two hundred and eighty kinds of licenses listed,⁴ which are classified by the sinking fund commissioners under thirty-eight heads. They are of a motley character —

¹ Sheriff's Report, 1914-15; cf. also list obtained from city assessor's office.

² Ibid.

³ Statutes, § 3011.

⁴ Tenth Biennial Compilation of General Ordinances of the City of Louisville. Cf. Index under licenses.

some imposed for regulatory purposes, others chosen quite spasmodically. The total receipts amounted to \$546,326 for the year ending December 31, 1915, liquor licenses bringing in \$343,425 of the total.¹

In addition to the regularly recurrent impositions there are the usual provisions for levying special assessments to defray improvement costs on abutting property owners. No doubt a certain amount of additional revenue could be legitimately secured from enlarging the scope of the special assessment in accord with modern practice.

Then the extraordinary income from bond issues has to be taken into account. This is a source of revenue which it is to be hoped will not be depended upon in the future to any large extent. The total bonded indebtedness of the city amounted in 1915 to \$12,405,000, representing long-term issues put out for permanent improvements such as schools, hospitals, parks, sewers, and waterworks. The sinking fund commissioners, besides controlling all the income from license taxation, received 11½ cents of the general tax levy, and in the year ending December 31, 1915, they disbursed \$615,558, a percentually large amount of total disbursements.² The per capita net indebtedness is above the average for cities falling within the group having from 100,000 to 300,000 inhabitants,³ and the only portion of the debt which is productive in the sense of being income-producing is that issued to cover investments in the municipally controlled Louisville waterworks. The stock shares of the company are held by the sinking fund, and interest on the mortgage

¹ Annual Report of the Louisville Sinking Fund for the year ending December 31, 1915, pp. 768, 769.

² Exhibit no. 4, Comptroller's Report; Report of Sinking Fund, p. 752.

³ Financial Statistics of Cities Having a Population of over 30,000 (1912), pp. 307-309. Bureau of Census, 1915.

bonds is paid by the commissioners from water company revenues transferred to them for that purpose. The net earnings of the company for the year ending December 31, 1915, \$400,379, were more than absorbed by an increase in assets,¹ and, altho an argument for regarding net returns as sums to be paid into the city treasury for purposes of a reduction in the general tax rate might be advanced, present procedure is probably sounder, in view of the size and character of the outstanding indebtedness.

There has been no attempt to vary the time at which bond issues shall mature with reference either to the character of the contemplated improvements or the probable borrowing needs of the future. The bonds outstanding, with the exception of two small refunding issues, have all been put out for forty year periods; and, as a large proportion are of recent origin, the city will be saddled with interest and amortization payments into the sinking fund for years to come.

The Louisville Board of Education takes independent charge of the funds received and disbursed for schools. By statute, the general council is compelled to appropriate not less than 36 cents per \$100 of assessed property values for transfer to the school fund.² In addition to this sum (\$751,302 in 1914-15) the board receives money from the state fund, amounting to \$264,456 in 1914-15. Total disbursements amounted to \$1,170,348 — indicating a per capita expenditure much in excess of that for other towns and cities in the state.³ Altho manufacturing establishments are entitled to a five year exemption from local taxation, dating from the time of their establishment, they are nevertheless forced

¹ Report of Water Company for year ending December 31, 1915, pp. 727-729.

² Statutes, § 2949a.

³ Annual Report of the Board of Education for the year ending August 31, 1915, p. 679.

to pay the 36 cent levy for school purposes, on the theory that the school tax is a state and not a local tax.¹ The exemption is in any case of doubtful efficacy in fulfilling its purpose and might as well be dropped. The city assessor states that the new companies are usually ignorant of these exemption privileges, while old ones have occasionally, after reorganization, attempted to evade the tax on a specious plea of "newness."

Even the preceding cursory examination of municipal finances makes it clear that neither city nor county relies upon sources of revenue distinct from those taxed by the state or independent of each other. Instead of segregation of the sources of revenue there is substantial identity. Any radical or even moderate reform in the state tax system is therefore bound to affect most gravely the income of all municipal taxing units. Hence it has seemed necessary to preface the discussion of impending changes in the state tax laws by surveys of the local tax systems.

II. RECOMMENDATIONS OF TAX COMMISSIONS OF 1908-09, 1912-14, AND 1916

Within less than ten years, three state commissions have studied the tax system of Kentucky and have made reports recommending changes in the existing laws. The Commission of 1908-09 suggested the classification of property for purposes of taxation and urged further the segregation of state and local sources of revenue. Without adequate antecedent investigation the committee expressed the opinion that state revenues could be raised by "taxes on corporations, on franchises, on certain licenses, on bonds, money at interest, and

¹ Kentucky Digest, p. 1955, vol. iii (1911-14), § 191. The legislature has no authority to exempt property subject to state taxation from taxation for school purposes. *City of Louisville v. Board of Education*, 154 Ky. 316 and 157 S. W. 379.

similar forms of personal property, in addition to the various forms of special taxes which in Kentucky are capable of considerable development."¹ It was thought that the cities could raise their revenues from real estate, from public utilities, from mercantile license taxes, and similar sources, an equitable arrangement being made for cities to contribute their share of the county expenses. Finally, "the counties would raise their revenues by direct tax on real estate and live stock and tangible forms of personalty, and the real estate and personalty so taxed would be taxed for no other purpose." Later investigation shows that these were very rash assumptions, based upon a reading of textbooks instead of an appraisal of the resources of the state.

The Special Tax Commission of 1912-14² which secured Professor Plehn as its expert adviser, made a valuable survey of the tax system of the state and suggested much needed reforms. Its report does not give expression to a preconceived preference for any particular scheme of taxation. Formulated as it is with reference to conditions actually existent in Kentucky, it is significant that it lays special emphasis upon the correction of administrative defects, without proposing any radical segregation of the sources of state and local revenue. The changes recommended are in general eminently sound, and if they had been adopted, great improvements in the revenue system would unquestionably have resulted. As it happened, only the proposal to classify property for purposes of taxation, a measure that had already been popularized by current discussion, met with immediate favor; and a constitutional amendment, permitting classification, was accord-

¹ Tax Revision, State of Kentucky, December, 1909, pp. 7, 8.

² Report of the Special Tax Commission, 1912-14.

ingly passed.¹ It was also proposed to expand the franchise taxes into a general corporation tax.² Marked emphasis, too, was laid upon the need of thoroughness in the assessment of real estate and the desirability of raising all assessments to full value.³ A general use of reliable maps, and quadrennial instead of annual assessments were urged.⁴ Among the other admirable proposals that were rejected at the time was a plan to institute a permanent Central Tax Commission to assume the duties of the Board of Equalization and the *ex officio* Board of Valuation and Assessment, and to take over the assessing powers of the Railroad Commission. Another most fundamental change — one that there is little present hope of ever securing — was embodied in the proposal to organize a corps of expert assessors, appointed under civil service rules.⁵ This last utopian suggestion was patently inspired by the non-resident expert. To a Kentuckian it appears a most radical departure from traditional methods. Any attempt to supersede the elective assessors would be certain to meet with determined and unquestionably successful opposition.

The third tax commission (officially known as the Kentucky Tax Commission) appointed by the governor in accordance with the provisions of a law passed by the

¹ The amendment provides that "the General Assembly shall have power to divide property into classes and to determine what class or classes shall be subject to local taxation" (by implication, therefore, the legislature may reserve certain classes of property exclusively for state taxation). The amendment permits a referendum either by legislative action or as the result of a call from the voters, but as to laws passed after January 1, 1917, a referendum is not necessary unless demanded in one of these two ways. Cf. Acts, Extraordinary Session, chap. 8, permitting a referendum on all acts classifying property for taxation, and providing a lower rate on personal property than on real estate, upon petition of voters equal in number to 5 per cent of those voting at last gubernatorial election.

² Report of the Special Tax Commission, 1912-14, p. 156, Subdiv. II. An Act Relating to Revenue and Taxation; cf. also p. 10 of Report — Recommendations.

³ Report of Special Tax Commission, 1912-14, p. 10.

⁴ *Ibid.*, pp. 142-154, Art. III, Subdiv. I and II; also cf. p. 9.

⁵ *Ibid.*, p. 138, § 5, Subdiv. III, Art. II; also p. 47.

Assembly of 1916, issued its report in December, 1916.¹ The report reiterated the demand for the creation of a permanent State Tax Commission to supersede the existing state boards and to supervise local tax officials. It proposed that equalization of assessments be made more effective by providing that an increase or decrease in the amounts demanded from the counties need not be distributed *pro rata* over all assessed property. It also suggested a plan for annual conferences of the local assessors at the state capitol, for the dissemination of advice to them, and for the assumption of supervision of their work by the proposed Tax Commission.

With the sanction of the constitutional amendment permitting classification, the commission urged that certain classes of property, namely: farm implements and farm machinery, machinery, raw materials and other products in course of manufacture, money, notes, bonds, accounts, and other credits, be exempted from local taxation. At the same time, the commission recommended that the state rate on all classes of property save bank deposits, be reduced from 55 cents to 40 cents per \$100. It proposed to limit the tax on bank deposits to a state levy of 10 cents per \$100, and to impose a mortgage recording tax of 25 cents per \$100 on all mortgages having over three years to run.

Tax Laws of 1917

At the time that the Kentucky Tax Commission issued its report, the need for legislation of some sort was imperative, as the state deficit had attained the dignity of an institution, having gradually increased until it amounted to \$3,131,726 (August, 1916). The yearly deficiency (between \$600,000 and \$700,000) has been

¹ Report of the Kentucky Tax Commission.

covered by the issue of warrants bearing 6 per cent interest, or latterly 5 per cent. In view of the emergency, a special session of the legislature (convened February 14, adjourned April 25, 1917) was called by the governor "to consider the subject of revenue and taxation exclusively." The legislature had to attempt the solution of a twofold problem. It had not only to undertake a reform of the general property tax in the interests of justice, but it had to discover methods of taxation that would produce an increase in the state revenue. It remains to be seen whether the emergency has been adequately met by the various tax acts that were passed in the course of the prolonged extraordinary session. At any rate, the Kentucky Tax Commission achieved very substantial success, for all its proposals were, with relatively minor changes, enacted into law.

The first law,¹ creating a State Tax Commission was, with one important exception, practically a duplicate of the tentative draft contained in Appendix A of the Report of the Kentucky Tax Commission. The chief alteration relates to the composition of the new commission. It had been originally proposed that it should consist of three appointive members and the auditor *ex officio*. As finally passed, the law provides for only two appointive members, one from each of the dominant political parties. As the auditor is an elective official whose time can well be devoted to learning the duties of his office, the change is not a fortunate one. Happily the two commissioners are eligible for reappointment, after serving four years, and their offices are made unattractive to the politically ambitious by the proviso that, for four years following the surrender of office, a commissioner is ineligible for any elective state office.

¹ Acts, General Assembly, Extraordinary Session, 1917, chap. 1. Act creating a State Tax Commission.

Another change in the law that is not advantageous is the substitution of conferences of assessors within the several congressional districts for state-wide conferences.

By far the most important change effected in the tax system by the new legislation is secured by the law reducing the state rate to 40 cents per \$100, and exempting from local taxation various classes of property, the exemptions being the same as specified in the proposals of the Kentucky Tax Commission.¹ It is expressly provided, however, that the local exemption of intangible personalty shall not be construed to include franchises of corporations or of the shares of stock of banks, trust companies, and domestic life insurance companies. But a change is made in methods of assessing and collecting taxes levied on banks and trust companies. Reports are hereafter to be made to local officers instead of to the state auditor, and these officials are to assess stock shares for state as well as local purposes. The banks will be required to report mortgage assignments to the Tax Commission, and a mortgage recording tax of 20 cents per \$100 is imposed upon all mortgages having five years or more to run.² Variations from the general state rate of 40 cents are allowed in two instances: (1) the provision limiting the tax on bank deposits to 10 cents per \$100,³ and (2) the reduction of the state tax on live stock to 10 cents per \$100, with the proviso that live stock shall remain subject to the usual local rate.⁴

One may concede unreservedly that a stride forward has been made by the imposition of a low rate tax on

¹ Acts, General Assembly, Extraordinary Session, 1917, chap. 11.

² The chairman of the Kentucky Tax Commission of 1916 expects this tax to yield from \$250,000 to \$300,000. The entire revenue is to be credited to the sinking fund. For an estimate of the total amount of mortgages annually recorded in Kentucky, cf. p. 34, *Taxation of Mortgages in Kentucky*. Brief submitted to Legislative Tax Commission of 1916 for Louisville Real Estate Board.

³ Acts, General Assembly, Extraordinary Session, 1917, chap. 4.

⁴ *Ibid.*, chap. 10.

intangible personalty. Classification must be endorsed as a measure of justice to the over-taxed holder of securities, and as an incentive to officials to ferret out the large number who escape payment altogether. No doubt the plan as a whole is a crude means of reaching the recipients of funded incomes. But in the absence of any state income tax, and given the stupidities of the general property tax, uniform moderate taxes upon "rights to receive" have justification as transition measures. The ultimate goal of tax reform, no doubt a distant one, should be the abolition of this method of taxation; but not until all the states are prepared to levy general income taxes of a uniform sort will the need for taxing security holdings as such vanish.

Altho approving the policy of placing a low rate tax on intangibles, the writer is somewhat sceptical regarding the revenue-producing efficacy of such taxes in Kentucky. The Special Tax Commission has averred that "the public at the hearings before this Commission made it very clear that they realized that there are in Kentucky vast sums invested in intangible personal property, such as foreign stocks and bonds, notes, mortgages, and accounts, which are now wholly omitted from assessment."¹ The report is not accompanied by any reliable statistical estimates of the amount of the above classes of property that would be available for taxation; and in their absence, statements must be based on pure conjecture. The writer believes that it would be conservative to assume that, given a rate of 40 cents, the amount of intangible personalty discovered and assessed could be trebled.² A serious deterrent to

¹ Report, Kentucky Tax Commission, p. 5.

² Personal interviews with officials and private citizens. Cf. also Brief in Behalf of Merchants and Manufacturers of Jefferson County, in which it is assumed that the reduction of the rate on intangible personalty will increase local assessments of this class of property about 300 per cent. The amount of evasion practised is certainly much greater than the above estimate would indicate in the case of bank deposits. Techni-

voluntary declaration, however, may result from the rigid uniformity of the 40 cent rate, which applies with minor exceptions to all classes of property. Whenever the state tax rate has to be raised — as in all probability it sometime may — will the increase affect all classes of property or will it be applied to realty and tangible personalty alone? It is submitted that the uncertainty due to the absence of a stated policy may militate against the declaration of ownership of intangible securities. On the other hand, the tax payer is encouraged to list his property by the remission of all penalties for a previous failure to make declaration.

At present the assessed value of intangible personalty subject to taxation amounts in round numbers to \$83,000,000. With the substitution of a rate of 40 cents per \$100 for the present state and local rates, it is important to note the amount of additional property that must be listed to secure even as much revenue as under the existing system. Computed roughly on the basis of the total amount collected from the tax on general property (no deduction being allowed for commissions, delinquencies, etc.), it would be necessary to increase the assessment base by a sum in excess of \$420,000,000.¹ If

cally, the extent of the evasion is not so serious as would appear from a comparison of the amounts returned for taxation with the amounts on deposit, as reported by the United States comptroller of the currency and the state banking commissioner, the reason being that outstanding checks may be deducted from statements of amounts on deposit. Hence, heavy drawing is customary the day before tax returns are to be made. Furthermore, so far as Louisville is concerned, considerable sums represent balances due other banks or deposits for persons living outside the city. For the state at large substantially 10 per cent of recorded deposits are listed for taxation. The Louisville City Assessors' lists for taxation about 4 per cent.

A certain amount of stock shares, previously tax exempt, become liable to the 40 cent rate. Hitherto, individual stockholders have not been required to list their shares if any property of the corporations whose stock they hold has been taxed directly. Under the new law, exemption is only secured if at least one-fourth of the total property of the company concerned is taxable in Kentucky. Cf. chap. xi, §§ 2, 3, Acts, Extraordinary Session.

¹ The above computation is based upon returns for 1914-15. The total assessment base has been taken to include the equalized value of all property certified to the State Board of Equalization; the assessed value of railroad tangible property, and of railroad

deficits had to be covered or additional revenue secured — in case other taxes failed to produce their estimated quota, as is quite likely — further large increases in the assessment base would be necessary. The writer would be much surprised to learn that any such amounts of intangible personalty are available for taxation in Kentucky. It is a safe guess that a considerable part of the increase will have to come from other sources, primarily a rise in realty assessments.

There is much evidence in the experience of other states to support the belief that a low rate tax on intangible personalty is by no means an infallible revenue producer. A mere decree of classification has no magic power to evoke more revenue. Even "vast sums," to quote the Special Tax Commission — and vast sums are not owned by Kentuckians — will not be lured out of hiding by a mere offer to reduce rates, if their owners previously escaped taxation entirely. Only a more vigorous, efficacious prosecution of tax delinquents will encourage declaration, even when the price of confession is reduced. One should beware of putting too much faith in the coöperation of the uncoerced taxpayer.

The point just made needs emphasis, because it is believed that any real solution of the financial difficulties of Kentucky is conditioned upon the administrative efficiency of the newly created Tax Commission. If its members undertake a vigorous supervision of the activities of the local assessors, it will be possible to increase considerably the assessments of intangible property. It remains to be seen whether the increase will more than cover the loss from the general reduction in the state

franchises; miscellaneous franchises (estimated); bank, trust, and insurance company shares; and distilled spirits (estimated).

As previously stated, the receipts from the general property tax, as reported by the Auditor in 1914-15, amounted to \$5,321,539. The estimated amount due on the basis of total assessments, however, was \$6,169,575. In computing the new assessment base, allowance has been made for this discrepancy.

rate, even if it accomplishes so much. But if the commission succeeds in obtaining a greater measure of uniformity in local assessment practices and is thereby enabled to raise the assessed values of realty and tangible personalty to figures approximating real values, it will have performed a valuable service for the state.

Another question that remains to be answered in connection with the classification law concerns the effect upon municipal revenues of the withdrawal of taxes on intangible personalty, machinery, raw products, etc. Specifically put, what will be the effect upon Jefferson County, and upon the city of Louisville? And where can they find substitutes for the taxes withdrawn? If this city and county can adjust their finances to the change, it may reasonably be inferred that other local taxing units will be able to manage, as it is Louisville, and Jefferson County through Louisville, that will suffer the greatest absolute losses.

The loss to Louisville, computed on the basis of assessments for 1915 will amount to about \$370,000. The relief gained by the reduction in the state rate, would, however, make it possible to tax the remaining classes of property somewhat more heavily without placing any additional burden upon them. This additional tax (estimated at about \$285,000), subtracted from the total deficit, would leave a net loss of only \$85,000. Probably the best means of meeting the loss would be an increase in the local property rate. Unfortunately at this point a difficulty is encountered. The maximum city rate is fixed at \$1.50 per \$100, exclusive of school taxes, and the city has reached that maximum. An amendment to the Constitution, raising or even removing the restrictive rate is very desirable. Given the inevitable delay and opposition to be encountered, increased revenues from general property could be

immediately secured by raising assessments on undervalued property. It has been suggested that Louisville and other municipalities might resort to business license taxes, based on gross receipts or some other arbitrary external estimates of ability to pay. Such a tax is easily collectible and of a type much in vogue in southern communities, which are afflicted with endless varieties of local license and occupation taxes.

The loss to Jefferson County under the new régime, will scarcely exceed \$60,000 or \$70,000, and it will be more than offset by the reduction in the state rate. The low state rate on live stock may also cause the county assessor to discover a somewhat larger amount for local taxation, thereby effecting a further slight reduction in the local deficit.

It was recognized by the advocates of the new type of state property tax, that even in its metamorphosed form, it would probably need to be supplemented by other kinds of taxation. The Kentucky Tax Commission conceded that it might be advisable to increase the amount of some of the license taxes now existing and to impose certain additional license and special taxes. The result was that the legislature made provision for a variety of new license or excise taxes, in addition to providing for an increase of the corporation license tax from 30 cents to 50 cents per \$1000 of authorized capitalization.¹

A tax on the output of the oil wells² of the state initiated a significant departure from the present easy-going methods of taxing mineral and timber lands either on the basis of their value for agricultural purposes — which may be nil — or on the basis of some equally convenient arbitrary estimates of value. This

¹ Acts, General Assembly, Extraordinary Session, 1917, chap. 7.

² *Ibid.*, chap. 9.

tax, levied in lieu of all other taxes on oil wells, is fixed at 1 per cent of the market value of the oil,¹ it being the duty of the State Tax Commission to determine what is a fair value. The output of the oil wells of the state has increased remarkably within recent months, and the latest figures published by the United States Geological Survey credit Kentucky with 1,200,000 barrels in 1916 as against an output of only 437,274 in 1915.² The state geologist reports the daily pipe line output (May, 1917) to be about 7000 barrels, while he estimates the total output at somewhat less than 10,000 barrels.³ Even with Kentucky oil now selling at \$2.20 per barrel, the returns from an ad valorem tax of 1 per cent will be modest. It has to be remembered, however, that the development of this natural resource is only in its initial stages, and in future years it may come to yield abundant returns.

The license taxes which have been mainly relied upon to produce immediate returns are certain excise taxes on distilled spirits⁴ and fermented liquors,⁵ and a per diem license tax on race track meets.⁶ Under the existing abnormal conditions, the tax on distilled spirits amounting to 2 cents per gallon could be counted upon to yield between \$600,000 and \$700,000; while the tax of 10 cents per barrel on beer would bring in about \$100,000.

¹ An additional one-half per cent may be levied by the counties.

² United States Geological Survey.

³ Letter, state geologist in response to inquiry. The coal output of Kentucky quadrupled during the fifteen-year period (1900-15), rising from 5,300,000 tons to 21,300,000 tons. A bill making provision for a tonnage tax on coal mined was bitterly opposed during the late special legislative session, and finally failed of passage. No doubt similar proposals will be introduced at the next session.

⁴ Acts, Extraordinary Session, 1917, chap. 5. On the basis of the number of gallons of distilled spirits manufactured during the fiscal year, 1916, namely 33,254,000 gallons, the new excise tax would produce \$665,080. To show the instability of the tax from the point of view of revenue it may be said that it would have brought in only \$278,820 in 1915. Report of the Commissioner of Internal Revenue, 1916.

⁵ Acts, Extraordinary Session, 1917, chap. 6.

⁶ Ibid., chap. 3.

The tax on race tracks was expected to amount to \$50,000.

It is obvious that permanent reliance can never be placed upon revenues derived from taxes levied upon the brewing and distilling interests. The sharp increases that are likely to be incorporated into the impending federal tax bill will greatly curtail the output of distilled spirits, if indeed, the rates are not so heavy as to destroy the industry. In any case, the yield is highly uncertain, and whether in time of war or of peace is likely any day to be swept away by national or state-wide prohibition measures.¹ The same criticism holds of the per diem tax on race track meets. Opposition to this form of legalized gambling grows in intensity, and its eventual abolition is certain. Any forward-looking policy must therefore make provision for finding substitutes for these unstable revenues which ultimately — perhaps even immediately — will be withdrawn.

PROPOSAL FOR A GENERAL CORPORATION TAX

One obvious (and in the writer's opinion, logical and desirable) method of increasing tax receipts would be an expansion of the present franchise taxes into a system of general corporation taxation.² It may be objected that, for purposes of corporate taxation, a distinction ought to be made between public service companies and other corporations. Against this opinion

¹ Written in June, 1917.

² It must be confessed that, in all likelihood, there is no legal authorisation for levying a corporation tax of the sort proposed, without further constitutional amendment. As § 172 of the Constitution (unrepealed) provides that all property shall be assessed at its fair cash value, there is no reason to suppose that classification has made it possible to levy taxes on other than an *ad valorem* basis. A constitutional amendment is not excessively difficult of passage, however, as it only requires a three-fifths vote of each house to enable an amendment to be submitted to a popular vote, and a majority of all votes cast for and against it, is sufficient to carry it. In any case, if constitutional obstacles could not be overcome, it would at least be possible to translate corporate incomes into expressions of capital value, as is done under the existing franchise taxes.

the writer would register a strong dissent. The income of the public service company ought to be controlled by regulatory laws, and then taxed, if at all, at ordinary rates. It is a poor policy that permits a public service corporation to secure excess income from the general public, which is to be taken away subsequently by the government, to the disburdening of the taxpayers alone. On the other hand, the time has not yet arrived when the users of public utilities can regard their interests as so identified with that of the whole body of taxpayers that rates can be reduced to a minimum consistent with adequate profits and the payment of no taxes.

As Kentucky has now a diversified system of license taxes levied on businesses, occupations, and the like, it would be a move in the right direction gradually to supersede these haphazard payments by a unified system of taxes covering incorporated businesses in the first place, and in course of time, unincorporated undertakings as well. This might also, become a point of departure from which a comprehensive scheme of income taxation could be gradually evolved. At present, public opinion would scarcely sanction a statewide income tax on individuals, and indeed it is doubtful if it would produce revenue enough to justify attempts at collection.

Such a proposal may seem peculiarly inopportune at a time when the federal government is preparing to draw heavily upon the selfsame source. A similar objection, however, will lie against almost any sort of tax increase that a state government may devise at the present time. For the period of the war, problems of state finance are certain to be highly vexing. It can at least be urged in answer that the contemplated federal increases are emergency advances, and it is to be hoped that, when peace is restored, rates will be reduced to

normal. In any case, the fact remains that state needs have to be met, however heavy the federal impositions, and the cost must be defrayed out of current income, whether by direct taxation or by more insidious methods.

So far as Kentucky is concerned, a tax of 4 per cent or even 6 per cent on corporate net incomes might well be welcomed, if it were coincident with exemption from taxes on intangible holdings such as accounts, bonds, and the like. The proposed tax would actually bring relief to the public service corporations, save in those cases where franchises have been egregiously undervalued. To take a hypothetical case: Company X, located in Louisville has a capital value of \$550,000, of which \$300,000 represents tangible property. The income of the company amounts to \$38,500 (7 per cent). Under the existing law it would be taxed on its franchise, valued at \$250,000, as follows: (1) 55 cents per \$100 (state); (2) 29 cents per \$100 (Jefferson County); (3) \$1.85 per \$100 (Louisville); a total of \$2.69 per \$100 or \$6725. Similarly a tax of \$2.69 would be levied on the \$300,000 of tangible property, which would amount to \$8070. The corporation would therefore pay \$14,795 in taxes to the state and municipalities concerned. If a tax of 4 per cent on net incomes were substituted in place of the franchise taxes, it would pay \$1540 instead of \$6725, and possibly reductions in state and local general property tax rates would also decrease the amount due from the tax on tangible property.

Provision for a general corporation tax was embodied in a bill proposed by the Tax Commission of 1912-14, which was not, however, recommended for immediate passage.¹ This bill merely contemplated an extension of the present method of franchise taxation to other than

¹ Report, Special Tax Commission, 1912-14, p. 156, Subdiv. III, Art. III of a Proposed Act Relating to Revenue and Taxation.

public service companies. As before, local taxing units were to be permitted to impose additional taxes upon the "intangible property" which was the basis of assessment. But if a general corporation tax should ever be levied, it would seem desirable to metamorphose the tax on capital value into a tax on net incomes, collected by the state, only tangible corporate property remaining subject to local impositions.¹ Such a tax, amounting to 4, 5, or 6 per cent of income should be imposed upon all net returns, irrespective of whether they might be distributed as dividends on stock or as interest on bonded indebtedness.

On the basis of official statistics and of information obtained from reports filed in the office of the state auditor, an attempt has been made to ascertain the capital value and the probable income of corporations doing business in Kentucky, with a view to determining how much revenue a general corporation tax could reasonably be expected to produce. The capital value of the miscellaneous public service companies (i. e., all except railroads and interurban street railways) subject to franchise taxes can be computed with some approach to accuracy on the basis of the returns made by these companies to the auditor's office. The capital value of these companies (June 30, 1915) was returned at approximately \$34,000,000.² This result was ob-

¹ Seligman, *Essays in Taxation*, p. 274, says: "At present in the United States, apart from the situation in Wisconsin, no attempt is made to tax simultaneously both corporate property and corporate income. The nearest approach to the practice is the system in some states like Maryland, Pennsylvania, and New York of taxing the capital stock and also the gross receipts of certain corporations."

If, however, the corporation tax is regarded as a tax on the privilege of doing business as a corporation, there can be no technical objection to this procedure.

The exemption of all but tangible property from local taxation would not cover unincorporated businesses, which would be taxed at the 40 cent rate on their bonds, notes, accounts, etc. Hence the advantage of exemption from the corporation income tax would very properly be minimised.

² These statistics have been computed from the franchise tax returns (miscellaneous corporations) filed in the auditor's office. A similar compilation for 1912 is published in the Report of the Special Tax Commission, 1912-14.

tained by capitalizing net income at 6 per cent and then taking 80 per cent of the total. Assessments, therefore, on a 100 per cent basis would amount to \$42,500,000.

The capital value of the railroad property in Kentucky is highly problematical. Since the franchise values of the most important systems are now in litigation, estimates can only be tentative. The assessed franchise values of the railroads for 1914¹ (inclusive of interurban electric railways and of the Louisville Railway Company) amounted to \$113,647,000 of which \$43,563,000 represented amounts in litigation. The assessment of tangible property by the Railroad Commission was placed at \$71,000,000. The total capital value, for purposes of taxation, was therefore \$184,647,000.

Estimates of the amount of capital controlled by other than public service corporations are more difficult of ascertainment. The license tax records on file in the auditor's office have been utilized to secure information. The law states that: "Domestic and foreign corporations shall pay an annual license tax of 30 cents on each \$1000 of that part of their authorized capital stock represented by property owned and business transacted in this state, which shall be ascertained by finding the proportion that the property owned and business transacted in this state bears to the aggregate amount of property owned and business transacted in and out of this state.² Corporations doing an interstate business may, however, elect to pay upon their entire authorized

¹ The statistics for 1914 are taken because the Board of Valuation is a year behind in its work of assessment. Statistics secured August, 1916.

² For the purpose of computing the amount of the tax, only authorized capital is considered. In one case, for example, a company with an authorized capital stock of \$75,000, of which \$60,000 had been issued, reported as follows: gross income, \$9,116.83; gross income (Ky.), \$4,345.44; value tangible property, \$60,000; value in Kentucky, \$14,723. The total gross earnings were added to the total value of the tangible property; likewise gross earnings in Kentucky were added to the value of the tangible property in Kentucky. The latter sum was found to be 27 per cent of the former, and 27 per cent of \$75,000 or \$20,250 was then given as the value of the capital stock for purposes of taxation in Kentucky.

capital stock, instead of reporting the details necessary for securing exemptions. Frequently foreign companies prefer to do this and domestic business corporations generally pay on their entire authorized capitalization, with the exception of a few that do considerable business outside the state. Hence the basis of assessment for domestic corporations closely approximates their total authorized capitals.¹

An examination of over 4200 license tax returns indicates that domestic corporations (other than public service, banking and trust companies) have an authorized capital stock of over \$200,000,000.² Foreign companies return about \$96,000,000 of authorized capital as taxable within the state (nearly one-third of this amount representing American Tobacco Company stock).³ The bond issues of the companies concerned are, however, excluded from this computation. The classified returns of corporations subject to the federal

¹ Companies paying franchise taxes do not have to pay license taxes. But a holding company, such as the Louisville Traction Co., a New Jersey corporation, pays a license tax, altho the underlying company, whose stocks are the sole property of the New Jersey corporation, pays a franchise tax. However, as the company owns no property in other states, stockholders are exempt from taxes on their shares. This is an unusual case; in general there is no duplication of this sort. A deduction has been made from the calculations of total authorized capital of "other corporations" of \$15,500,000, to avoid including the capital of the Louisville Railway Co. twice, as it is listed among the railroad assessments.

The Central Home and Telephone Co. (Del.), also pays a license tax on a capital stock of \$2,000,000, as a foreign holding company.

§ 4085 (Ky. Statutes), as construed by the state courts, provides that when a corporation owns property in the state and uses it bona fide in its business, be it ever so insignificant a part of the whole property, payment of taxes thereon by the corporation exempts the stockholder from taxation of his shares. But this does not exempt the stockholder of a foreign holding company, which owns the stock of corporations owning property in the state and paying taxes thereon. Cf. *Commonwealth v. Meier*, 186 S. W. 194.

² A limited number of foreign corporations, engaged in or about to engage in the exploitation of coal and oil properties, have all their holdings located within the state.

³

\$204,980,000	capital stock of domestic companies as estimated
96,285,900	" " " " " foreign

Compiled from an examination of returns made to the auditor. There are, no doubt, inaccuracies, as no official compilations are available; but the totals are believed to be substantially correct. Statistics might have been obtained by capitalizing the tax returns on the basis of the license tax rate, were it not for that provision of the law requiring a minimum payment of \$10.00.

income tax, given in the Report of the United States Commissioner of Internal Revenue for 1914, indicate that companies included in the groups subject to license taxation have a bonded debt amounting to about 40 per cent of their capital stock. Accepting this proportion, total capitalization would amount to \$420,000,000. It is questionable whether it is safe to assume that authorized capitalization even approximates the value of these businesses as going concerns. But in the absence of any other reliable estimates, it may be taken as an imperfect measure of actual value. The greater number of returns are for companies of small capitals. Of the records for more than 3500 domestic corporations over 2900 represent companies with a capitalization of \$50,000 or less.¹ In the majority of cases, there is probably little incentive to overcapitalize and any such overcapitalized concerns would be likely to be more than offset by the undercapitalized ones. Corroborative evidence is afforded by the statistics published in the Report of the Commissioner of Internal Revenue, previously cited. The net taxable income is over 9 per cent of the capital stock of companies composing the groups that would be subject to license taxes.

To resume, it is estimated on the basis of the scanty official statistics available, that the public service companies control approximately \$227,000,000 of capital; banks and trust companies \$56,500,000; and all other corporations \$420,000,000 — a total slightly in excess of \$700,000,000, and equal to the amount which according to Professor Plehn would be necessary to effect a segregation of state and local sources of revenue. If the

¹ The companies having large capitals are preponderantly representative of the distilling and tobacco manufacturing interests. However, a number of companies, both foreign and domestic, with large authorized capitals, control coal and oil lands. Many of these are obviously capitalized on expectations of profits to come, as the exploitation of the mineral resources of eastern Kentucky is only in its initial stages.

average income of these companies be assumed to be only 6 per cent,¹ the net income available for taxation under a general corporation tax would be \$42,000,000.

An attempt has been made to check these computations by comparisons with the returns secured by the federal government. The value of such comparisons is, however, vitiated by the fact that the federal returns are allocated to the state in which the principal place of business of the corporation is situated, irrespective of the amount of business done there.² Returns are classified by groups in the Report of the Commissioner for 1914; namely:

- I. Financial and Commercial Corporations.
- II. Public Service Corporations.
- III. Industrial and Manufacturing Corporations.
- IV. Mercantile Corporations.
- V. Miscellaneous Corporations.

Unfortunately, attempts at classification have since been discontinued. At the end of June, 1915, the federal returns from Kentucky corporations taxed on net incomes (exclusive of interest) amounted to \$343,000, representing a taxable income of \$34,300,000. In 1916 returns amounted to \$411,000 on incomes of \$41,100,000. The computed total income of \$42,000,000, including as it does interest on the bonded debt, is, therefore, considerably below the amount that could probably be discovered for taxation under an only fairly energetic administration of an income tax law.

Discrepancies between the estimated capital values previously given, and the par value of outstanding stock

¹ This estimate of average profits is no doubt overmodest. Six per cent has been used, because it is the rate which was selected by the State Board of Valuation for computing capital values on the basis of income returns. At present the board is using a 7 per cent basis.

² Letter from office of Commissioner of Internal Revenue in response to inquiry

and bond issues are greatest in the case of public service companies. The total capitalization of this group of corporations, on the basis of the arbitrary 6 per cent rate of capitalization, amounted to \$227,000,000 for purposes of state taxation, whereas the federal returns show capital stock of \$196,300,000 and a bonded debt of \$246,900,000, a total of \$443,200,000.¹ The statistics for financial and commercial institutions are not entirely comparable but differences are inconsiderable. The estimated total capitalization of all other corporations, \$420,000,000, is almost \$90,000,000 in excess of the totals given in the Report of the Commissioner, but differences in methods of allocating returns largely explain the lack of correspondence. However, the net profits of the last named corporations subject to the federal income tax amounted to \$22,907,335, in 1914 a sum exceeding 9 per cent of the capital stock; whereas the returns computed by the writer on a 6 per cent basis for both stock and bonds only amount to \$25,200,000. In any event, the estimates err on the side of conservatism, and a tax of 6 per cent levied on net incomes of all corporate businesses in Kentucky, could with a fair degree of certainty be counted upon to yield \$2,500,000.

Effect Upon Municipalities of Proposed Changes

If the proposed extension of corporate taxation should ever become a reality, to what extent could the state emancipate itself from a too exclusive reliance upon the general property tax? How seriously would the revenues of municipal taxing units be affected, if the state should retain for itself the proceeds of such a corporation tax, in addition to the returns from the classes of property already reserved for exclusive state taxation? Where, for example, could Jefferson County and the

¹ Report of Commissioner of Internal Revenue, 1914, p. 101.

city of Louisville find substitutes for the local taxes now levied on franchises, bank shares, and the like ?

An attempt has been made to answer these questions, altho it is frankly conceded that the computations are based upon assumptions which may not consort with facts. But they serve at least to illustrate some of the methods that may be employed to test the practicability of tax reform proposals. Furthermore it is believed that the estimates are sufficiently within the limits of probability to demonstrate one important point: namely, that any measures designed to reduce state dependence upon the general property tax will burden the larger towns and cities to the relief of the rural districts. Within reasonable limits this is as it should be. In view of the backward and impoverished condition of many counties of Kentucky, additional state revenues ought to be taken from the wealthier sections for the benefit of all the people; hence another strong argument in favor of a general corporation tax.

It may be provisionally estimated that the limitation of the tax on intangible personalty to 40 cents per \$100 will mean a gain of about \$540,000 to the state assuming that the amount of intangible personalty assessed will be trebled. The additional revenue from the corporation taxes, assuming they would yield \$2,500,000, would amount to \$1,714,000, a total of \$2,250,000 in round numbers, a sum far from sufficient to replace the amounts at present received from the general property tax.¹ If the 40 cent rate on intangible personalty were maintained unaltered, it would at least be possible to reduce somewhat the state rate on tangible personalty and realty. Assuming that no larger returns are expected than are now obtained from the assessments of

¹ A deduction of \$786,000 has been made to allow for the returns received from the existing franchise and corporation license taxes, taxes on banks and trust companies, and domestic life insurance companies. (Report, Auditor, 1914-15.)

realty and tangible personalty (exclusive of franchise and bank taxes), the rate could be reduced to 30 cents. If stationary revenues from this source should not suffice, an additional \$700,000, or a sum about equal to the present annual deficit, could be secured by imposing a rate of 38 cents.

On the basis of these assumptions, the loss to Louisville would be considerable — a loss that would not be counterbalanced by the reduction in the state rate. The city controls a percentually large amount of property of the above classes, and the gain to the state through its reservation would be spread over the entire commonwealth for the benefit of communities that would otherwise scarcely be affected by the change. At the existing city rate of \$1.85 per \$100, a relinquishment of franchise and bank taxes would necessitate finding substitute revenues to the amount of \$460,000 or thereabouts. Such a loss, together with the reduction due to the withdrawals already suffered, previously estimated to amount to \$370,000, would involve a total sum of about \$830,000. On the other hand, a reduction of the state rate to 30 cents or 38 cents as the case might be, would enable local rates to be increased 25 cents and 17 cents respectively without causing an increase in the total rates for state and city. On a reduced tax basis of \$165,000,000¹ the additional revenues would amount to \$412,500 or \$280,500.

¹ Cf. Comptroller's Report, 1915. If franchises as well as intangible personalty, raw materials, machinery, etc., were withdrawn from local taxation, the assessment base would be reduced to

\$21,140,000	assessed value personalty
61,350,000	" " land
73,000,000	" " improvements
9,500,000	" " railroad tangible property
<hr/>	
\$164,990,000	" " property that would remain
subject to city rate \$1.85 per \$100.	
.0025 × 165,000,000 = \$412,500;	
.0017 × 165,000,000 = \$280,500.	

But Jefferson County has still to be considered. How would its receipts be affected, and to what extent would its taxpayers be further burdened by the changes proposed? Total returns by the sheriff to the county treasurer amounted in 1914-15 to \$732,870; but the amount collected was considerably in excess of the above sum, which is a net return, exclusive of the sheriff's commissions on collections. Allowance being made for these commissions, it is estimated that the withdrawal of the franchise and bank taxes, added to withdrawals under the recent state legislation, would force the county rate to be raised to 38 cents. For residents outside Louisville, much more than adequate compensation would be secured by the reduction in the state rate. For Louisville, the 9 cent increase would offset in part the relief gained by the reduction in the state rate.

To recapitulate: the loss to Louisville from the withdrawal of the tax on intangible personalty, machinery, raw materials, etc., would be \$370,000; the loss from franchise and bank taxes, \$460,000. The rise in the county rate would necessitate raising additional county taxes within the city to the amount of about \$150,000,¹ a total of about \$980,000. On the other hand, the reduction of the state rate to 30 cents or 38 cents would offset this increase to the amount of \$412,500, and \$280,500 respectively, leaving a net of loss of \$567,500 or \$699,500. As the total income from the general property tax only amounted to \$3,451,700

¹ The local county assessments for the city districts amounted (1915) to \$157,974,000 (exclusive of classes of property hereafter exempt from local taxation). These assessments are also exclusive of franchise and bank assessments. If to this be added the value of railroad tangible property certified at \$9,500,000, a total assessment base of \$167,474,000 is obtained. (No data for computing assessable value of distilled spirits within city limits.) The city assessor's office uses a somewhat lower assessment base for the above properties. For purposes of the county tax, the county valuation would of course hold.

$$.0009 \times 167,474,000 = \$150,726.60.$$

(1914-15), an attempt to secure this additional sum by direct taxation would raise the already high rate on realty and tangible personalty to a rather forbidding figure.

The obvious remedy for this situation would be the redistribution to Louisville and other municipalities, deprived of their customary revenues, of some part of the proceeds of the corporation taxes. If two-thirds of the returns from private business corporations were reapportioned, the state might lose roughly 40 per cent of its income from the general corporation tax, or about \$1,000,000. Presumably, a large proportion of this total sum would go to Louisville, if distribution were to be made on the basis of the location of the property. According to the census of 1910, Louisville is credited with \$101,000,000 of manufactured products out of a total of \$223,700,000 (or 45 per cent of the total). If only 40 per cent of the tax on private business were returned to Louisville, it would receive \$400,000. After all adjustments, following from the consequently higher state rate, had been made, the net additional burden would approximate \$480,000.¹ It might be met in part

¹ The computations given above are based on the assumption that the 40 cent tax on intangible personalty alone would yield \$1,000,000, and that the proposed corporation income tax would amount to \$2,500,000, of which \$1,000,000 would be returned to the localities. Under these conditions what is the tax rate which will produce the amount of revenue obtained from the existing general property tax at a rate of 55 cents in addition to replacing the omitted corporation license taxes, and covering a possible deficit of \$700,000? $\$985,141,000$ (assessment base for 1915 exclusive of franchise and bank share valuations); $\$902,141,000$ (ibid., with a further deduction of the assessed value of intangible personalty); $\$667,000$ (returns from franchise and bank taxes; cf. Auditor's report, 1914-15); $\$119,000$ (returns from corporation license tax).

$$\$985,141,000 \times .0055 + \$667,000 + \$119,000 + \$700,000 = 902,141,000x + \$1,000,000 + \$2,500,000 - 1,000,000; x = .00488 (.0049).$$

The assessment base for the general property tax exclusive of franchise and bank share valuations can be stated with a fair degree of accuracy. The assessment base for intangible personalty is likewise obtainable (the actual returns from this source are not available, as they are not listed separately). The assessment base for franchise and bank taxes, however, can only be estimated with considerable allowance for error. Therefore in the above computations as well as in similar preceding ones, the net returns reported by the auditor from these tax levies have been utilized in place of estimates

simply by increasing the assessed values of realty in certain districts which are now especially favored; but in the end a rise in the general property rate would seem to be inevitable. In any case, however faulty the above estimates, it is believed that they suffice to show that the deficit would be small enough to be handled with relative ease.

If a plan of taxation similar to the one outlined, should be adopted, it would have the merit of achieving at least a step in the direction of a comprehensive form of income tax. It would immediately provide additional funds from new taxes, while securing elasticity through the retention of the general property tax. In the corporation taxes, the state would control a source of revenue that would grow with an increase in economic prosperity, and as has been shown, the losses sustained by the municipalities could be mitigated by a judicious redistribution of part of the taxes collected.

Kentucky might well follow the admirable example set by Connecticut and West Virginia in relying upon returns made to the federal government for securing information upon which to base assessments of corporate incomes. It would be unfortunate to establish an independent system of income taxation, as in Wisconsin, or a hybrid form of income tax, as in Massachusetts, without an attempt at the coördination of state and federal systems. It is much to be hoped that eventually all particularistic forms of income taxation will give place to supertaxes levied by the states as percentages of the rates imposed by the federal government. Altho this is a consummation to be wished for, it will necessitate

of the total amounts due. The error in the final result is slight, and, in any case, unavoidable.

On a city assessment base of \$165,000,000 (reduced by withdrawals), a 6 cent addition to local rates, counterbalancing the reduction in the state rate, would yield \$99,900 (approximately \$100,000). This sum, together with \$400,000 to be returned from the proceeds of the corporation tax, would reduce the loss to Louisville from \$980,000 to about \$480,000.

some definition of the limits of state taxation of incomes. Otherwise, the federal government may in the future find a normally elastic source of revenue so heavily burdened with state taxes as seriously to hamper its own activities.

III. CONCLUSION

The inequalities and injustices arising from an imperfect tax system may be great and glaring, but they are of lesser weight than the evils of unscientific methods of appropriation and careless distribution of revenue. Yet the state must and should look forward to a rapid increase in budgetary requirements, not only because of a general increase in governmental expenses but through an enlargement of its sphere of activity and an assumption of lines of work previously delegated to the municipal authorities.

It must be confessed that an advocate of centralization is likely to be appalled by the knowledge that Kentucky already spends nearly 50 per cent of its annual receipts in subsidizing the public schools of the state. Indeed, but for these heavy payments, the question of revenue reform might not be vexing the people at the present moment. Given the low standard of instruction and the high percentage of illiteracy, the plea for more centralization may seem ill-advised. But the poor results are in all likelihood due to the imperfect centralization of the educational system of the state and to unwise methods of subsidy distribution. They are not necessarily illustrative of the folly of state aid.

The superintendent of public instruction in his Biennial Report for 1914-15 makes an able plea for a change in the methods of distributing the state fund.¹ At present apportionment is on a per capita basis. A

¹ Kentucky School Report, 1914-15, p. xxvii.

county, no matter how backward, no matter how lax in enforcing the compulsory attendance law, gets its quota of the school fund, computed according to the number of children of school age within its limits. In practice, distribution is automatic, as very little effective pressure can be brought to bear upon the county superintendents, *elective* officials, who merely pass a *pro forma* qualifying examination.

Subsidies should only be given to those localities that are willing to maintain standards of efficiency set up by the state authorities. Disbursements on the basis of amounts raised and expended locally for schools would prevent less public spirited communities from throwing the burden of school maintenance too largely upon the state. But on the other hand it would prevent the state from granting needed assistance to the very poor sections. No automatic method of distribution can ever be devised that will be entirely satisfactory. Until Kentucky and other states can secure executive heads whose judgment and good faith can be relied upon to distribute funds wherever needed with a minimum of demoralization to the recipients, such funds will continue to be more or less ineffectively apportioned. The unattainable ideal would be to have all school levies paid into a general fund to be distributed on the basis of numbers needing instruction. It is intolerable that the poverty or affluence of a restricted district should affect the character of the instruction offered to the children who happen to have either the good luck or the ill fortune to live there. Of course, the same thing holds true for the country at large. But it is a far cry from the exclusive county, district, or city school system to the nationalization of educational facilities.

In another field, heretofore left entirely to county supervision, the state is now recognizing its obligations.

The wretched roads, sometimes the lack of roads, have made large parts of the state difficult of access. Undoubtedly the development of Kentucky's natural resources has been retarded in consequence, and the farmer has had a part of his legitimate profits absorbed by transportation costs. A state department of roads was organized in 1914 and a fund for road building secured through the passage of a law providing for a special road tax of 5 cents per \$100. The law fortunately does not make the mistake of granting indiscriminate subsidies, as the department may refuse aid to counties whose road plans seem ill-advised or inadequate. Apportionment is based on the amount of local expenditures, with the provision that no county is to receive more than 2 per cent of the total sum disbursed annually. The law further empowers the counties to vote bond issues for road improvement, one-half the cost to be assumed by the state. Several counties have already taken advantage of this law. This method of subsidization gives most to the counties that have the largest budget, Jefferson County, for example, receiving one of the most substantial appropriations. Moreover, it puts a heavy emphasis upon the county as a unit for road-building purposes. The intent is to encourage the upbuilding of a system of roads that will connect the one hundred and twenty county seats of the commonwealth. It would, of course, be much better to build highways without reference to county seats and endless county lines. However, the educational value of making state aid contingent upon compliance with certain standards of excellence is of more value than the financial assistance rendered.

Other examples of the extension of the formerly limited functions of state administration need only be mentioned. There has been a rapid increase in the

number of state supervisory offices and departments, such, for instance, as the office of Bank Commissioner; the Insurance Board; the Compensation Board (to administer the new workmen's compensation law); the Board of Control which supervises the management and controls the expenditures of the three state insane asylums and the Institute for the Feeble-minded. And now a Board of Tax Commissioners has been added to the rapidly lengthening list.

Any change in the direction of greater state centralization aids the movement toward greater uniformity in governmental activities. Tax reforms within a state ought to be of a character to strengthen the central administrative authority and to increase the supervisory functions of state officials. And these reforms ought to be directed toward greater uniformity among the states, to the end of reaching nation-wide uniformity. No single instrument is a more potent means to the attainment of this end than the taxing power. It must be conceded, however, that any move in the direction of greater centralization of power is necessarily dangerous so long as numerous elective officials are depended upon to administer the tax laws, and so long as appointive positions, important and petty, remain party spoils. No system, however admirable in theory, will ever meet the needs of Kentucky or any other state until its citizens have developed an effective sentiment in favor of civil service reform.

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